

**FEDERAL STATE BUDGET EDUCATIONAL
HIGHER EDUCATION INSTITUTION
"ROSTOV STATE MEDICAL UNIVERSITY"
MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION**

FACULTY TREATMENT AND PREVENTIVE

Evaluation materials

by discipline TRAUMATOLOGY, ORTHOPEDICS

Speciality General Medicine

1. List of competencies formed by the discipline

general professional (OPK):

Code And Name general professional competence	Indicator(s) achievements general professional competence
<p>OPK 4 Able to use medical devices provided for in the procedure for providing medical care, as well as conduct examinations of the patient in order to establish a diagnosis</p>	<p>ID1 OPK-4 Able to use medical devices during diagnostic studies provided for in the procedures for providing medical care</p> <p>ID2 OPK-4 Able to apply diagnostic methods, including the use of instrumental methods, when examining a patient in order to establish a diagnosis</p>
<p>GPC 7 Able to prescribe treatment and monitor its effectiveness and safety</p>	<p>ID 1 GPC-7 Knows modern drug and combination treatment regimens in accordance with the standards of medical care</p> <p>ID 2 OPK-7 Able to recognize signs of typical complications during pharmacotherapy with the aim of its timely correction</p> <p>ID 3 OPK-7 knows prescribing patterns for safe combinations of drugs in accordance with clinical recommendations.</p>

2. Types of assessment materials in accordance with the competencies being developed

Name competencies	Types of assessment materials	number of tasks for 1 competency
OPK-4	Closed tasks	25 with sample answers
	Open type tasks: Situational tasks Addition tasks	75 with sample answers

OPK-4:

Closed type tasks: *TOTAL 25 tasks.*

Task 1. Instructions: Choose one correct answer.

In what position is the distal fragment of the femur located when it is fractured at the level of the distal third?

1. up;
2. posteriorly;
3. proximally;

Response standard: 2. posterior;

Task 2. Instructions: Choose one correct answer.

When exposed to indirect violence, where does the radius fracture occur?

1. upper third;
2. middle third;
3. lower third;
4. at the border of the upper and middle thirds;
5. at the border of the middle and lower thirds.

Response standard: 3. lower third;

Task 3. Instructions: Choose one correct answer.

Which artery is pressed in the area of the “anatomical snuffbox” when there is bleeding in the hand area?

1. posterior interosseous artery;
2. artery accompanying the median nerve;
3. dorsal carpal artery;
4. ulnar artery;
5. radial artery;
6. artery of the thumb.

Response standard: 5. radial artery;

Task 4. Instructions: Choose one correct answer. What shape does the hand take in case of radial nerve palsy?

1. elongated;
2. half-bent;
3. hanging;
4. claw-shaped;
5. bent;
6. straightened;
7. without features;
8. sharp adduction of the first finger.

Response standard: 3. hanging;

Task 5. Instructions: Choose one correct answer.

Indicate in which direction the angle of displacement of fragments is open in fractures of the metacarpal bones?

1. back;
2. palmar;
3. radial;
4. elbow;

Response standard: 2. palmar;

Task 6. Instructions: Choose one correct answer.

In what direction does the proximal fragment shift during fractures of the radius in the area between the attachment sites of the biceps brachii muscle and the pronator teres muscle?

1. anteriorly;
2. posteriorly;
3. pronation;
4. supination, flexion position;
5. between pronation and supination;
6. pulled up to the ulna;
7. pulled up to the radius;
8. flexion position.

Response standard: 4. supination, flexion position;

Task 7. Instructions: Choose one correct answer.

In what direction does the distal fragment shift during fractures of the radius in the area between the attachment sites of the biceps brachii muscle and the pronator teres muscle?

1. anteriorly;
2. posteriorly;
3. pronation;
4. supination;
5. between pronation and supination;

6. pulled up to the ulna;
7. pulled up to the radius;
8. flexion position.

Response standard: 3. pronation;

Task 8. Instructions: Choose one correct answer.

8. Which muscles cause displacement of fragments in fractures of the radius in the area between the insertions of the biceps brachii and pronator teres muscles?

1. biceps muscle;
2. pronator teres;
3. shoulder;
4. brachioradialis;
5. ulna;
6. pronator teres;
7. pronator quadratus;
8. instep support;
9. flexor carpi ulnaris;
10. flexor carpi radialis;
11. flexor digitorum profundus.

Response standard: 1. biceps muscle;

Task 9. Instructions: Choose one correct answer.

The surgeon usually makes an incision along the lateral surface of the thigh due to the fact that it is Continue the sentence:

1. convenient,
2. safe due to the absence of main vessels;
3. dangerous, due to the presence of the peroneal nerve in the distal part.

Response standard: 2. safe due to the absence of main vessels;

Task 10. Instructions: Choose one correct answer.

Syndactyly is..... Continue the sentence:

1. fused fingers;
2. extra finger;
3. short, underdeveloped finger;
4. skin constriction at the base of the finger.

Response standard: 1. fused fingers;

Task 11. Instructions: Choose one correct answer. How many condyles does the humerus have?

- eleven;
2. 2;
3. 3;
4. none.

Response standard: eleven;

Task 12. Instructions: Choose one correct answer.

What is the normal width of the x-ray gap of the knee joint in young people in direct projection?

1. 1-2 mm;
2. 2-3 mm;
3. 4-5 mm;

4. 10 mm

Response standard: 3. 4-5 mm;

Task 13. Instructions: Choose one correct answer. The average value of the neck-shaft angle is normal

1. 100°

2. 97°

3. 127°

4. 105°

5. 135°

Response standard: 3. 127°

Task 14. Instructions: Choose one correct answer. What is the functionally advantageous position for the lower limb?

1. lead - 20°, flexion at the knee joint - 170°;

2. lead - 0°, flexion at the knee joint - 120°;

3. lead - 10°, flexion at the knee joint - 130°;

4. lead - 20°, flexion at the knee joint - 140°;

5. lead - 30°, flexion at the knee joint - 150°.

Response standard: 1. lead - 20°, flexion at the knee joint - 170°

Task 15. Instructions: Choose one correct answer.

Normally, the axis of the lower limb in the frontal plane passes:

1. through the inferior anterior iliac spine, the medial edge of the patella and the first toe;
2. through the superior anterior iliac spine, the medial edge of the patella and the second toe;
3. through the superior anterior iliac spine, the middle of the patella and the second toe;
4. through the superior anterior iliac spine, the lateral edge of the patella and the third toe;
5. through the superior anterior iliac spine, the lateral edge of the patella and the fourth toe.

Response standard: 3. through the superior anterior iliac spine, the middle of the patella and the second toe;

Task 16. Instructions: Choose one correct answer.

A 32-year-old patient, a turner by profession, with no concomitant diseases, underwent osteosynthesis for a fracture of the femur. The fracture was consolidated, but then the symptom of a "stuck heel" and adduction of the entire lower limb were determined. What is your opinion about what happened?

1. ileofemoral thrombosis;
2. osteomyelitis;
3. nail migration;
4. unspecified fracture of the femoral neck;
5. damage to the sartorius muscle.

Response standard: 4. unspecified fracture of the femoral neck;

Task 17. Instructions: Choose one correct answer.

17. The patient received a direct blow to the groin area. After this he began to notice limitation of active extension of the lower leg. During the examination, the doctor identified a small swelling in the groin area. What is your diagnosis?

1. damage to the semitendinosus muscle;
2. damage to the sciatic nerve;
3. damage to the peroneal nerve;
4. damage to the tensor fascia lata;
5. damage to the femoral nerve.

Response standard: 5. damage to the femoral nerve.

Task 18. Instructions: Choose one correct answer.

During an X-ray examination of the patient, areas of destruction of the cortex with the so-called "Codman's visor" were found in the tibia. What is the patient's illness?

1. bone sarcoma;
2. multiple myeloma;
3. Recklinghausen's disease;
4. fibrous osteodysplasia;
5. syphilis.

Response standard: 1. bone sarcoma;

Task 19. Instructions: Choose one correct answer.

Generalized hypermobility syndrome includes 5 main criteria (9 points). Eliminate the incorrect sign.

1. extension of the little finger over 90 degrees;
2. bringing the thumb to the forearm;
3. hyperextension of the elbow joint;
4. hyperextension of the knee joint;
5. touch your chin to your chest;
6. touch your palms to the floor without bending your knees.

Response standard: 5. reach your chin to your chest;

Task 20. Instructions: Choose one correct answer.

What type of injury is associated with the “backing up” symptom - it is difficult to move forward due to pain, but it is easy to move backward?

1. avulsion fracture of the anterior superior spine;
2. avulsion fracture of the anterior inferior spine;
3. damage to the femoral nerve;
4. separation of the lata fascia of the thigh;
5. damage to the gluteus minimus muscle.

Response standard: 2. avulsion fracture of the anterior inferior spine;

Task 21. Instructions: Choose one correct answer.

You are operating on a patient with an olecranon fracture. Which method of osteosynthesis do you prefer?

1. purse string lavsan suture;
2. osteosynthesis with sections of Kirschner wires;
3. U-shaped wire seam;
4. osteosynthesis with a screw;
5. osteosynthesis with a tension loop according to AO-Weber.

Response standard: 5. osteosynthesis with a tension loop according to AO-Weber.

Task 22. Instructions: Choose one correct answer.

A patient with a closed injury of the right ankle joint undergoes radiography of both ankle joints in a direct projection with internal rotation of the legs by 30°. For what purpose is this being done?

1. to identify a fracture of the inner malleolus;
2. to identify a fracture of the lateral malleolus;
3. to identify a fracture of the posterior edge of the tibia;
4. to identify a fracture of the posterior process of the talus;
5. to identify a rupture of the distal tibiofibular syndesmosis.

Response standard: 5. to identify a rupture of the distal tibiofibular syndesmosis.

Task 23. Instructions: Choose one correct answer.

Identify the defining clinical sign of dislocation in any joint

1. relaxation of the muscles surrounding the joint
2. tension in the muscles surrounding the joint
3. spring resistance when attempting passive movement
4. joint deformation
5. lengthening or shortening of the dislocated segment.

Sample answer: 3. spring resistance when attempting passive movement

Task 24. Instructions: Choose one correct answer.

Highlight the symptoms that are absolute for a bone fracture

1. pathological mobility and crepitus of bone fragments
2. swelling and bleeding into soft tissues
3. local pain and dysfunction
4. limb deformity
5. hyperemia in the area of the fracture.

Sample answer: 1. pathological mobility and crepitus of bone fragments

25. Name a symptom characteristic of an impacted fracture of the femoral neck:

1. pronounced limitation of movements in the hip joint;
2. external rotation of the hip;
3. slight shortening of the thigh;
4. pain in the hip joint when loading along the hip axis;
5. symptom of "stuck heel".

Standard answer: 5. symptom of "stuck heel".

OPK-4:

Open type tasks: *TOTAL 75 tasks*

Addition task.

Task No. 1

Instructions: instead of a dash, write only one correct word.

Avascular necrosis of bone is a typical complication of a _____ bone fracture.

Correct answer: ram.

Task No. 2

Instructions: instead of a dash, write only one correct word.

An axial load on the spine, which can be combined with forced flexion, causes a _____ fracture.

Correct answer: compression.

Task No. 3

Instructions: instead of a dash, write only one correct word.

The most common shoulder dislocations are _____

Correct answer: anteriorly.

Task No. 4

Instructions: instead of a dash, write only one correct word.

Leading method treatment post-traumatic osteomyelitis
is_____.

Correct answer: PCDO (transosseous compression-distraction osteosynthesis).

Task No. 5

Instructions: instead of a dash, write only one correct word.

Conservative treatment of clubfoot begins_____

Correct answer: from birth.

Task No. 6

Instructions: instead of a dash, write only one correct word.

The most reliable method for diagnosing osteoarthritis is _____. Correct answer: X-ray.

Task No. 7

Instructions: instead of a dash, write only one correct word.

The most difficult type of shoulder dislocation to diagnose is _____.

Correct answer: rear.

Task No. 8

Instructions: instead of a dash, write only one correct word.

The main source of blood supply during a fracture is _____. Correct answer: periosteum.

Task No. 9

Instructions: instead of a dash, write only one correct word.

When an avulsion fracture of the internal condyle of the humerus occurs, the _____ nerve is affected.

Correct answer: elbow.

Task No. 10

Instructions: instead of a dash, write only one correct word.

Anatomical reposition, interfragmentary compression are principles _____ stability.

Correct answer: absolute.

Situational tasks.

Task No. 11

An elderly plump woman walked along the icy sidewalk. She slipped and fell, leaning on the palm of her outstretched right hand. Severe pain appeared in the wrist joint. I went to the trauma center. Objectively: the right wrist joint is swollen, movements in it are very painful and limited. A "bayonet-shaped" deformation of the joint is clearly defined (the distal fragment, together with the hand, is displaced to the rear). Palpation of the dorsal surface of the joint is painful. Axial load causes increased pain at the site of injury.

Make a preliminary diagnosis.

Reference answer: Closed fracture of the distal epimetaphysis of the right radius with displacement of fragments (Colles fracture).

Task No. 12

The young man, defending himself from a blow with a stick, raised his left arm, bent at the elbow, above his head. The blow hit the upper third of the forearm. Severe pain appeared at the site of injury. The forearm is bent at the elbow joint, deformed in the upper third, there is a depression on the side of the ulna and a protrusion along the anterior surface of the forearm. The victim went to the hospital's trauma department. During an external examination of the left elbow joint, the head of the radial bone is palpated. Palpation of the deformed area is sharply painful. The damaged forearm is somewhat shortened. Active and passive movements of the forearm are severely limited and painful. The sensitivity of the hand and forearm is not impaired.

Make a preliminary diagnosis.

Reference answer: Closed, displaced fracture of the ulna of the left forearm. Dislocation of the radial head (Montaggi injury)

Task No. 13

A middle-aged man was carrying a load in his right hand, stumbled and fell on his right shoulder. A strong blow fell on the area of the shoulder joint, which at that time was lowered as far as possible under the weight of the load. The man felt severe pain in his shoulder area. A day later he went to the trauma department of the hospital. During a comparative examination of the healthy and damaged shoulder girdle, the right shoulder girdle is swollen, and the outer (acromial) end of the clavicle protrudes stepwise. Local pain is noted in the acromioclavoid joint. Movement in the shoulder joint, especially abduction and elevation of the shoulder, is limited and painful. When pressing on the acromial end of the clavicle, it lowers; after the pressure stops, it rises again - springy mobility of the clavicle.

Give reasons for the preliminary diagnosis. Suggest a plan for examination and treatment.

Reference answer: the patient has a positive "key" symptom, which is characteristic of a dislocation of the acromial end of the clavicle. It is necessary to take x-rays with the patient standing. If the diagnosis is confirmed, surgery – open reduction, osteosynthesis.

Task No. 14

The young man fell from a height of about 3 m. The main force of the blow fell on his left leg. I couldn't get up on my own. Delivered to the hospital's trauma department. Upon examination, the left thigh is swollen, deformed, and its axis is bent. Feeling the injury site is painful. Pathological mobility appeared in the middle third of the thigh. Can't lift his left leg. Sensitivity and motor function of the foot are fully preserved. The pulse in the peripheral arteries is preserved.

Make a preliminary diagnosis.

Reference answer: Closed fracture of the diaphysis of the left femur with displacement of fragments.

Task No. 15

An elderly man fell on his right side from a height of about 3 m. The maximum impact fell on the greater trochanter of the right femur. The victim was taken to the hospital's trauma department. I am worried about pain in the right hip joint. The motor function of the joint is significantly limited. The leg is in a forced position: the thigh is bent and rotated inward. Loading the hip axis is painful. The greater trochanter is pressed inward, tapping on it causes pain. A hematoma is detected in the groin area on the right.

Make a preliminary diagnosis. Reference answer:

Severe closed injury to the right, possibly, and hip joint. fracture, dislocation in the proximal femur.

Task No. 16

According to the patient: at the time of the accident he was in the car next to the driver and hit his right leg. Upon receipt of a complaint of pain in the right hip joint, he cannot move his right leg. The general condition is serious. Pale skin, cold sticky sweat. Blood pressure - 100/70, pulse - 112/min., respiratory rate - 16/min. Conscious, communicative, somewhat inhibited, did not lose consciousness. There are no focal neurological symptoms.

Make a preliminary diagnosis.

Reference answer: fracture of the proximal right femur. traumatic shock.

Task No. 17

Patient S., 41 years old, loader at a meat processing plant. Complaints of pain in the lower extremities, radiating to the thighs and legs; the pain intensifies in the afternoon; in the evening there is moderate swelling of the soft tissues of the dorsum of the foot. On examination: pronounced deviations of the first toes of both feet outward, pain when walking and standing, swelling of the forefoot, and calluses on the plantar surface of the feet. Wears wide shoes, 1-2 sizes larger than usual, pain intensifies with changing weather, season, changing shoes, when jumping and running.

Make a preliminary diagnosis. Reference

answer: Bilateral flat feet.

Task No. 18

An elderly man, 78 years old, fell in the street. Severe pain appeared in the groin area. The victim was taken to the hospital's trauma department. When examining the patient in a horizontal position, the right leg is rotated outward, shortened by 3 cm at the expense of the hip. He cannot place the foot vertically on his own. An attempt to do this with outside help leads to severe pain in the hip joint. The patient cannot lift his leg straightened at the knee joint; instead, he bends it, and the leg slides with the heel on the bed (symptom of "stuck heel"). Tapping on the heel and greater trochanter is painful.

Make a preliminary diagnosis.

Reference answer: Closed fracture of the right femoral neck.

Task No. 19

The driver of a car suddenly braked in front of a nearby pedestrian. As a result, he hit his chest hard on the steering wheel. I went to the trauma department of the hospital. The victim complains of severe pain at the site of injury, increasing with deep inspiration, coughing and palpating. The patient sits in a forced position, motionless, bending his torso forward, slouching, breathing frequently and shallowly. The sternum is painful, has a stepped deformation (the body of the sternum is displaced back), especially noticeable on palpation.

Make a preliminary diagnosis. Reference

answer: Closed sternal fracture.

Task No. 20

A 78-year-old patient fell at home in the bathroom, resting on her left arm. I felt a sharp pain in my left shoulder joint and could not move my left arm. I couldn't sleep at night because of severe pain and took analgesics. In the morning, neighbors brought her to the hospital emergency department (14 hours after the injury).

Make a preliminary diagnosis.

Reference answer: Closed fracture of the surgical neck of the left shoulder.

Task No. 21

The man was doing renovations in the apartment. Punched through a concrete wall with a punch. I accidentally hit the nail phalanx of the first finger of my left hand with a hammer. I went to the trauma center. Upon external examination of the first finger, the nail phalanx is swollen and painful on palpation. Movement in the finger is limited. There is a hematoma under the nail plate. Loading along the axis of the finger is painful. Grasping any objects with your finger is impossible due to pain.

Make a preliminary diagnosis. Offer treatment.

Reference answer: The preliminary diagnosis is subungual hematoma of the first finger of the left hand. Treatment – Evacuation of the hematoma. Immobilization.

Task No. 22

The young man fell from a height of 2 m. The main blow fell on his left heel. Delivered to the hospital's trauma department. Objectively: the left heel is flattened, widened and swollen. There is a bruise under the inner ankle. The longitudinal arch of the foot is flattened. Putting weight on the heel is impossible due to severe pain. Palpation of the heel is painful. Contraction of the calf muscles causes increased heel pain. When viewed from the back of both feet, it is clear that on the injured side the ankles are lower and the axis of the heel bone is tilted inward. Active adduction and abduction, pronation and supination are absent.

Make a preliminary diagnosis.

Reference answer: Closed fracture of the left calcaneal foot.

Task No. 23

He was delivered 50 minutes after the injury: he got caught in the moving conveyor mechanism with his right hand. There is sharp pain on palpation in the middle third of the shoulder, the hand hangs down. There is pronounced swelling from the level of the upper third of the shoulder to the elbow joint, the segment is shortened, crepitus of fragments.

Make a preliminary diagnosis.

Reference answer: Closed fracture of the right shoulder with displacement of fragments, damage to the radial nerve.

Task No. 24

The teenager's right hand got caught in a moving machine during agricultural work. As a result of the injury, the nail phalanx of the fourth finger is crushed. On the same day I went to the trauma center. Upon external examination of the fourth finger of the right hand, the nail phalanx was crushed. The skin in this area is torn. The wound is heavily contaminated with soil and technical grease. When palpating the nail phalanx, crushed small bone fragments are felt under the skin. There is little bleeding from the laceration.

What qualified medical care is needed?

Reference answer: Primary surgical treatment of the wound with the formation of stumps the phalanx. Immobilization. Antibiotics. Emergency prevention of tetanus.

Task No. 25

Delivered 40 minutes after falling from a height of 5 meters. He lies on his back with complaints of severe pain in the right hip joint. The limb is slightly abducted, externally rotated and straightened. The femoral head is palpated under the ligament of Poupert, the greater trochanter cannot be palpated, the skin of the distal limb is cyanotic, and pulsation in the vessels is weakened. Active movements in the hip joint are impossible, passive movements are limited, springy.

Make a preliminary diagnosis. Reference answer:

Closed dislocation of the right hip.

Task No. 26

Patient D., 23 years old, was hit by a car on the roadway outside a pedestrian crossing. Passers-by called an ambulance, which delivered the victim 40 minutes later. After an injury to the emergency department of a city hospital. On admission: pale skin, conscious, no retrograde amnesia, PULSE 100 beats per minute. satisfactory filling. Blood pressure 100/60 mm Hg. Art. The left lower limb is fixed with a transport splint from the toes to the lower leg. The gauze bandage on the lower leg was soaked with blood. The toes are warm and of normal color, active movements are impossible due to pain. After removing the bandage, there is a laceration on the front surface of the leg measuring 3x5 cm with raw edges. The lower leg is deformed at the border of the middle and lower thirds at an angle open inwardly and anteriorly. The pulse in the arteries of the foot is clearly visible. Sensitivity is not impaired. There is slight bleeding from the wound on the shin.

Make a preliminary diagnosis. Reference answer:

Diagnosis: open comminuted displacement 2-B fracture of the bones of the left leg with
by classification Kaplan-Markova. Compensated reversible
traumatic shock.

Task No. 27

An elderly man was taken to the clinic from the scene of a car accident. I am worried about pain in the pubic and perineal area. Moving your legs increases the pain. Palpation of the pubis is painful on both sides. Blood is released drop by drop from the external opening of the urethra. A hematoma formed in the perineum. The bladder is full, and its bottom protrudes beyond the pubic symphysis. An attempt to empty the bladder leads to burning pain and this forces the victim to stop urinating.

Provide a preliminary diagnosis.

reference answer: Fracture pelvic bones with damage to the urethra.

Task No. 28

The woman stood at the closed door. Suddenly the door quickly swung open and hit her on the straightened, tense fingers of her left hand. As a result of the injury, the nail phalanx of the third finger was sharply bent and seemed to "hang." Soon after the injury, the patient applied

to the trauma center. Objectively: there is slight swelling on the dorsal surface of the third finger of the left hand in the distal interphalangeal joint; it is moderately painful on palpation. The nail phalanx is bent and does not straighten on its own. Passive movements are preserved.

Make a preliminary diagnosis.

Reference answer: Closed rupture of the extensor tendon of the 3rd finger, possibly with avulsion of a bone fragment from the base of the nail phalanx.

Task No. 29

The admitted patient complains of pain in the right half of the pelvis. According to the patient, 40 minutes before admission he was hit by a car and received a blow to the right half of the pelvis. I didn't lose consciousness. Upon examination, it was revealed: in the area of the wing of the right ilium there is an extensive subcutaneous hematoma, sharp pain on palpation of the pubic and ischial bones, as well as in the area of the wing of the ilium on the right. The right leg is bent at the knee and hip joints and slightly rotated outward. When measuring the length of the right leg, no absolute shortening is determined, however, when measuring the length from the xiphoid process, there is a relative shortening of 2.5 cm. Larrey's symptom and Vernel's symptom are positive.

Make a preliminary diagnosis.

Reference answer: Based on the mechanism of injury and the patient's complaints, it can be assumed that there is a fracture of the iliac bones. The positive Larrey's symptom and Vernell's symptom give reason to talk about this.

Task No. 30

The young man tried to lift a large load. I felt a cracking sound and severe pain in my right shoulder joint. For the first 2 days after the injury, he did not seek medical help, and only on the 3rd day did he go to the trauma center. Objectively: a bruise has appeared on the anterior surface of the right shoulder in the upper third, the strength of the biceps muscle is reduced. The function of the elbow and shoulder joints is not impaired. When the forearm is flexed at the elbow joint, a spherical protrusion appears on the anterior outer surface of the shoulder, the size of a chicken egg. When the forearm is extended, this formation disappears. By palpation, it became clear that this formation belongs to the long head of the biceps brachii muscle.

Make a preliminary diagnosis.

Reference answer: Closed rupture of the long head of the biceps tendon of the right shoulder.

Task No. 31

Patient V., 42 years old. Delivered by passing vehicle. He slipped on the street and fell. At the same time, as the victim noted, the right shin sharply twisted and severe pain appeared in the knee joint. I clearly heard a "crunch" in the joint. On examination: the right lower limb is in a state of "blockade" of the knee joint, locally: pronounced swelling of the tissues, especially in the area of the medial fissure, bruising. On palpation there is sharp pain in the joint and a pronounced symptom of lateral rocking. The patella is running.

Make a preliminary diagnosis.

Reference answer: Diagnosis: closed injury of the right knee joint, hemarthrosis.

Task No. 32

A 23-year-old patient came to the surgical clinic of the clinic with complaints of pain in the right knee joint and periodic "jamming" of the joint. He was ill for about two years when he suffered a joint injury while playing football. I did not go to the doctor, I was treated with home remedies (rubbing, compresses). Periodically wore a knee brace. Four days before the treatment, getting out of the car, I twisted my leg, again felt pain in the knee joint, could not straighten my leg, then with some movement "the joint snapped into place."

Make a preliminary diagnosis.

Reference answer: Closed injury to the medial meniscus of the right knee joint.

Task No. 33

A 26-year-old woman fell from the height of the second floor while washing a window, landing on both feet. She noted a sharp pain in the right heel area and minor pain in the lumbar region. When I tried to walk, I was unable to walk due to severe pain in the right heel area. The ambulance team arrived and applied a Kramer ladder splint to the right shin and foot and transported the patient to the hospital on a stretcher. She was taken from the car to the emergency room on a sitting gurney, where she was laid on her back on the couch.

Make a preliminary diagnosis.

Reference answer: Closed fracture of the right calcaneus.

Task No. 34

A sixth grade secondary school student was riding on the stair railing. When I tried to slide down again, I fell on my left arm, which was bent at the elbow joint and supported by the palm. At the same time, the forearm seemed to “overbend”. As a result of this injury, severe pain appeared in the elbow joint. I turned to the trauma center for help. Objectively: the left elbow joint is enlarged and deformed, the cubital fossa is smoothed. When carefully palpated from behind, the olecranon process protrudes. The axis of the shoulder is shifted forward. The hand is in a forced semi-extended position. The victim holds it with his healthy hand. Active movements in the elbow joint are impossible. When attempting passive movements, springy resistance is felt.

Make a preliminary diagnosis.

Reference answer: Closed posterior dislocation of the left forearm.

Task No. 35

An elderly man lifted a two-pound weight. When the straightened right arm with the weight was above his head, he was unable to fix it in this position. The weight began to pull the hand back by inertia. Something crunched in the shoulder joint, severe pain appeared, and he was forced to drop the weight. After this injury, the shoulder joint took on an unusual appearance. The patient went to the trauma center. Upon examination, the right arm is bent at the elbow joint, slightly removed from the body, and the patient holds it by the forearm with his healthy hand. The shoulder joint is deformed. The roundness of the shoulder at the deltoid muscle has disappeared. The edge of the acromion process of the scapula clearly protrudes, and below is the empty glenoid cavity. A spherical protrusion is determined under the coracoid process. Active movements in the shoulder joint are impossible. Passive movements are very painful. Springy resistance of the shoulder is noted.

Make a preliminary diagnosis.

Reference answer: Closed anterior dislocation of the right shoulder.

Task No. 36

A police officer was stabbed in the stomach while detaining a criminal. Delivered to the abdominal surgery department. When examining the abdomen, there is a stab wound about 2 cm long on the front wall, 3 cm to the left of the umbilical ring. The stomach is involved in the act of breathing. Tension of the abdominal muscles is determined only within the wound. There were no peritoneal symptoms, vomiting, flatulence, or increased heart rate. Body temperature is normal. The blood picture is within normal limits, a slight swelling is detected in the wound area, palpation of the abdomen is painful only at the site of injury. There are no signs of intra-abdominal bleeding.

Make a preliminary diagnosis. Reference

answer: Penetrating abdominal wound

Task No. 37

Complaints of pain in the right hip joint. Considers himself sick for the last 3 years. History of hard work. Walks using a stick. On examination: the contours of the right hip joint are smoothed. Movements are painful and limited; a "crunch" is noted during abduction and rotation of the hip. There is a slight distortion of the pelvis and moderate scoliosis. When walking, I have been experiencing pain in my feet and calves lately. Make a preliminary diagnosis.

Reference answer: Right-sided coxarthrosis.

Task No. 38

A man was unloading lumber. Due to careless actions, a wooden beam fell from the car and hit him on the left forearm. The victim went to the trauma center. Objectively: at the site of the bruise (on the outer palmar surface of the lower third of the left forearm) there is a subcutaneous hematoma. Palpation of the injury site is painful, and crepitus of bone fragments is detected. When the axis of the forearm is loaded, pain appears at the site of injury. Pronation and supination are difficult; attempting to perform these movements causes severe pain. Flexion and extension of the forearm are almost unlimited. The distal part of the forearm and hand are in a pronated position.

Make a preliminary diagnosis.

Reference answer: Displaced closed fracture of the left radius.

Task No. 39

A 47-year-old patient was admitted to the orthopedic department with complaints of pain in the left knee joint. According to the patient, he has been suffering from pain for 4 years. Notes that pain in the joint is associated with physical activity. Often happens in the morning when getting out of bed and in the evening at the end of the working day. With rest, the pain in the joint goes away. The patient works as a turner and stands on his feet all day. Over the past 1.5 years, the pain has become more intense and, in addition, the joint periodically began to swell. Make a preliminary diagnosis.

Reference answer: Left-sided gonarthrosis.

Task No. 40

Patient K., 32 years old, was taken by ambulance to the emergency department. According to the patient: he fell from a height of 1.5 m, hit his head and the right half of his chest. Complaints of dizziness, nausea, pain in the right side of the chest. Inability to take a deep breath due to pain. When coughing, the pain in the right half of the chest increases sharply. The general condition is moderate, conscious, alert, oriented. Notes loss of consciousness due to injury. The skin is pale pink in color. Breathing in the lungs is somewhat weakened. Respiratory rate 16 min BP-130/80, pulse-84/min. The neurological status at the time of examination showed horizontal nystagmus. Local status: in the forehead area, from under a loose bandage, a wound with uneven edges measuring 5 x 1.5 cm with traces of bleeding is visible. On palpation of the chest there is sharp pain, crepitus, pathological mobility of the 4,5,6,7 ribs on the right along the anterior axillary line. There is no subcutaneous emphysema. The right half of the chest lags behind in the act of breathing.

Make a preliminary diagnosis. Reference answer:

Associated injury: Concussion, rib fracture. head brain Multiple

Task No. 41

A 75-year-old woman, leaving a store, stumbled and fell on her left elbow and felt pain in the left shoulder joint. On the same day I went to the doctor. On examination: the left shoulder joint is enlarged; tapping the elbow causes pain in the shoulder joint. Active and

passive movements in the shoulder joint are severely limited due to pain. The head of the humerus is palpated in its usual place.

Make a preliminary diagnosis.

Reference answer: Closed fracture of the surgical neck of the left shoulder.

Task No. 42

The diver hit his head on the ground in shallow water. I am worried about pain in the cervical spine. Objectively: the head is in a forced position. Palpation of the spinous processes of the V and VI cervical vertebrae is painful. There is deformation in the form of noticeable protrusion of the spinous processes of these vertebrae. The patient's attempts to move his head are almost impossible, very painful and significantly limited. Sensitivity and motor function of the upper and lower extremities are fully preserved.

Make a preliminary diagnosis.

Reference answer: Closed severe injury of the cervical spine.

Task No. 43

A 60-year-old man tried to lift a large load. I felt a cracking sound and severe pain in my right shoulder joint. For the first 2 days after the injury, he did not seek medical help, and only on the 3rd day did he go to the trauma center. Objectively: a bruise has appeared on the anterior surface of the right shoulder in the upper third, the strength of the biceps muscle is reduced. The function of the elbow and shoulder joints is not impaired. When the forearm is flexed at the elbow joint, a spherical protrusion appears on the anterior outer surface of the shoulder, the size of a chicken egg. When the forearm is extended, this formation disappears. By palpation, it became clear that this formation belongs to the long head of the biceps brachii muscle.

Make a preliminary diagnosis.

Reference answer: Rupture of the long head of the biceps of the right shoulder.

Task No. 44

A 16-year-old teenager fell from a swing and hit the ground with the outer surface of his right shoulder joint. Severe pain appeared in the collarbone area. I went to the trauma center. On external examination, there is a deformation of the right clavicle, the right shoulder girdle is shortened and lowered below the left. With a healthy hand, the patient holds the injured arm by the forearm, bent at the elbow joint, and presses it to the body. The area of the right collarbone is swollen. On palpation, sharp pain appears and it is possible to determine the ends of fragments that are approximately equal in size. Movement in the right shoulder joint is painful, especially when trying to lift and abduct the arm.

Make a preliminary diagnosis.

Reference answer: Closed fracture of the clavicle in the middle third.

Task No. 45

The young man fell and hit his left elbow joint on a hard object, while his arm was bent. I went to the trauma department of the hospital. Upon external examination, the left arm is straightened and hanging down. The patient spares her, holding her with his healthy hand. The elbow joint is enlarged in volume, swelling is detected along the posterior surface. Palpation of the joint is painful, the pain is especially intensified by pressing on the olecranon process. A transverse fissure is felt between the process and the ulna. The olecranon process is slightly displaced laterally. Passive movements in the elbow joint are free, but painful. Active extension is impossible, and flexion is preserved, but painful.

Make a preliminary diagnosis.

Reference answer: Closed fracture of the olecranon process on the left with displacement.

Task No. 46

Patient T., 69 years old, fell on the steps of an escalator in the subway and hit his left knee joint on the edge of the step. I felt a sharp pain in the joint. I contacted the metro employees, who called an ambulance. Upon admission to the hospital emergency department: the limb is fixed with a transport splint from the toes to the hip. After removing the splint, there is a superficial skin abrasion on the front surface in the area of the patella, the joint is sharply increased in volume. On palpation, effusion is detected in the joint cavity, and diastasis is detected in the area of the patella.

The victim is able to actively bend the knee joint to an angle of 160 degrees, but active extension of the limb in this joint is impossible. Palpation and active movements increase pain.

Make a preliminary diagnosis.

Reference answer: Closed fracture of the left patella with displacement.

Task No. 47

Patient V., 42 years old. Delivered by passing vehicle. He slipped on the street and fell. At the same time, as the victim noted, the right shin sharply turned outwards and severe pain appeared in the knee joint. I clearly heard a "crunch" in the joint. On examination: the right lower limb is in a state of "blockade" of the knee joint, local tissue swelling is pronounced, especially in the area of the medial gap of the knee joint. On palpation, sharp pain in the joint and a pronounced symptom of lateral swing - when the tibia is abducted outward. The patella is running.

Make a preliminary diagnosis.

Reference answer: Closed injury to the internal joint. collateral ligament of the right knee

Task No. 48

Delivered 40 minutes after falling from a height of 5 meters. He lies on his back with complaints of severe pain in the right hip joint. The limb is slightly abducted, externally rotated and straightened. The femoral head is palpated under the ligament of Poupart, the greater trochanter cannot be palpated, the skin of the distal limb is cyanotic, and pulsation in the vessels is weakened. Active movements in the hip joint are impossible, passive movements are limited, springy.

Make a preliminary diagnosis. Reference answer:

Closed dislocation of the right hip.

Task No. 49

The man, defending himself from a knife attack, grabbed the knife with his right hand by the blade. The attacker forcefully pulled it out of the defender's hand. As a result, on the palmar surface of the right hand

the victim suffered a deep wound. The patient went to the trauma center. An external examination of the right hand reveals a deep transverse incised wound 4 cm long with smooth edges and severe bleeding on the palmar surface. Deep in the wound, in the area of the third finger, the peripheral end of the tendon is visible; there is no central end in the wound. The third finger is extended, there is no active flexion of the terminal and middle phalanges.

Make a preliminary diagnosis.

Reference answer: Incised wound of the right hand with damage to the flexor tendons of the 3rd finger.

Task No. 50

Woman 40 years old. While walking, her left foot fell into a shallow hole, the woman lost her balance and fell, feeling a crunch and sharp pain in the lower third of her left shin. On examination: deformation, pathological mobility in the area of the border of the middle and lower third of the left leg, crepitus of bone fragments. There is a small wound measuring 0.2 x 0.2 cm on the front surface of the left shin in the deformation zone.

Make a preliminary diagnosis.

Reference answer: Open 1A Kaplan-Markov fracture of the bones of the left tibia with displacement.

Task No. 51

The patient suffered a fracture of 3 metacarpal bones. At the trauma center, the doctor on duty under local anesthesia performed primary surgical treatment of the wound and osteosynthesis with knitting needles, applied a plaster cast and sent the patient home.

Did the doctor have the right to operate on such a fracture in a trauma center? Standard

answer: The doctor at the trauma center did not have the right to operate on such a patient at the trauma center. This rule is regulated in the list of the volume of assistance provided in trauma centers. There you can only operate on fractures of 1–2 metacarpal bones. And fractures of the 3 metacarpal bones lead to loss of the skeleton function of the hand and are recommended to be treated in a hospital. Moreover, with an open fracture, antibacterial therapy and constant monitoring of the condition of the wound are necessary.

Task No. 52

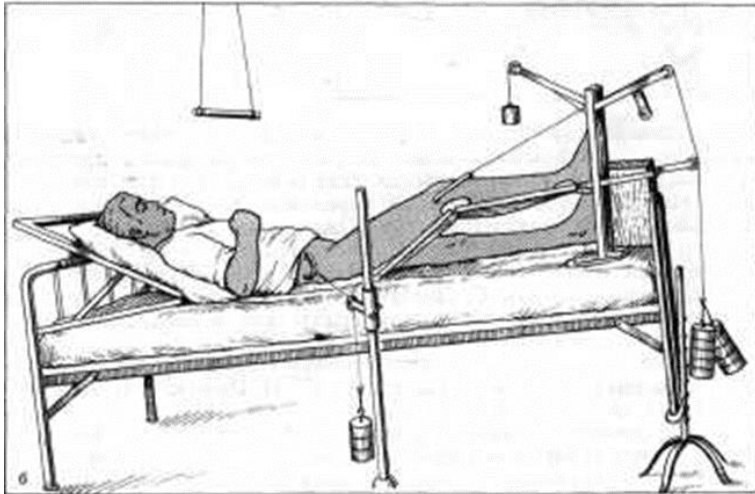
A patient has been admitted to your orthopedic and traumatology department whose tibial fracture has not healed within 4 months.

With what diagnosis will he be hospitalized in the department?

Reference answer: slow consolidation tibial fracture. Since the period after the injury was 4 months, less than double the usual period of consolidation of this segment of the musculoskeletal system.

Task No. 53

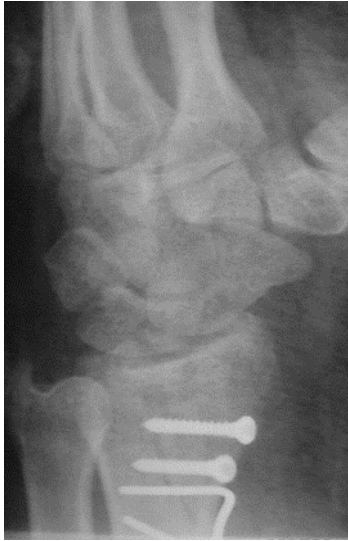
1. What treatment method was used for the patient?



Reference answer: The treatment method shown in the photo is conservative - skeletal traction.

Task No. 54

2. What type of osteosynthesis was used in the patient with a fracture of the radius?



Reference answer: The treatment method shown in the photo is surgical - cortical osteosynthesis.

Task No. 55

What examination of the knee joint was performed on the patient?



Reference answer: The diagnostic method shown in the photo is magnetic resonance imaging.

Task No. 56

What types of damage are possible to the hand in this area?



Reference answer: Damage to the median nerve and flexor tendons of the 2-3 fingers.

Task No. 57

What type of chest deformation is observed in the patient?



Reference answer: Pectus excavatum.

Task No. 58

What is shown in the photo? Are these products used in the postoperative period?



Reference answer: Elastic bandages are used after surgery to prevent swelling and thrombosis.

Task No. 59

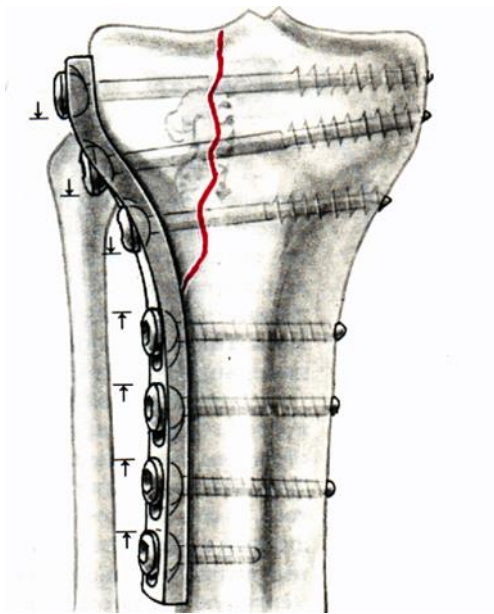
What orthopedic product is shown in the photo?



Reference answer: Corset for the lumbar spine.

Task No. 60

What treatment method was used for the patient?



Reference answer: The treatment method shown in the photo is surgical - bone osteosynthesis.

Task No. 61

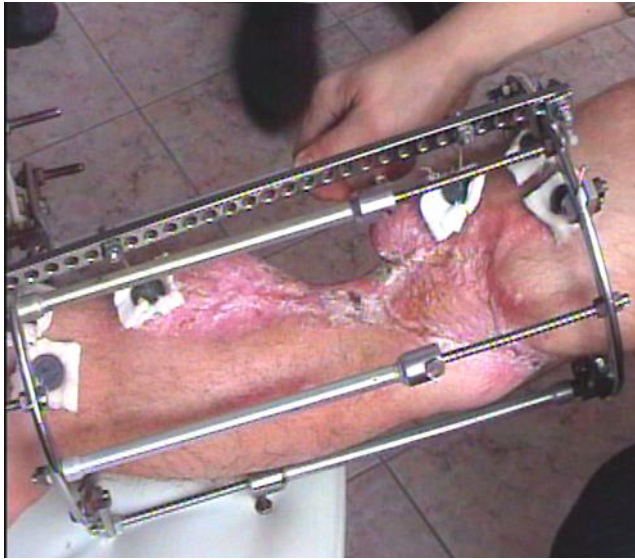
Make a preliminary diagnosis.



Reference answer: Stage 3 deforming arthrosis of the hip joint shown on the radiograph.

Task No. 62

What treatment method was used for the patient?



Reference answer: The treatment method shown in the photo is operative - transosseous osteosynthesis according to Ilizarov.

Task No. 63

Make a preliminary diagnosis.



Reference answer: in the photo shown, there is a C-shaped right-sided scoliosis.

Task No. 64

Make a preliminary diagnosis.



Reference answer: in the photo shown there is a fragmentary fracture of the femur.

Task No. 65

Make a preliminary diagnosis.



Reference answer: Closed injury to the biceps brachii muscle.

Task No. 66

Make a preliminary diagnosis.



Reference answer: Closed injury (subcutaneous tear) of the calcaneal tendon.

Task No. 67

Make a preliminary diagnosis. What treatment method should be shown to the patient?



Reference answer: Closed femoral neck fracture. Total hip replacement is indicated.

Task No. 68

What treatment method was used for the patient?



Reference answer: The treatment method shown in the photo is operative - transosseous osteosynthesis according to Ilizarov.

Task No. 69

Make a preliminary diagnosis.



Reference answer: fused 3rd and 4th fingers (syndactyly).

Task No. 70

Make a preliminary diagnosis.



Reference answer: hammertoe deformity of the 2nd toe.

Task No. 71

Make a preliminary diagnosis.



Reference answer: tumor of the 1st metacarpal bone.

Task No. 74

What treatment method was used for the patient?



Reference answer: The treatment method shown in the photo is conservative - immobilization of the knee joint.

Task No. 75

What treatment method was used for the patient?



Reference answer: The treatment method shown in the photo is conservative - immobilization of the cervical spine.

Name competencies	Types of assessment materials	number of tasks for 1 competency
OPK-7:	Closed tasks	25 with sample answers
	Open type tasks: Situational tasks Interview questions Add-on tasks	75 with sample answers

OPK-7:

Closed type tasks: **TOTAL 25 tasks.**

Task 1. Instructions: Choose one correct answer.

The patient is 70 years old, without concomitant diseases, after a medial neck fracture femur and osteosynthesis, consolidation of the fracture did not occur, signs of lysis of the neck and aseptic necrosis of the femoral head began to be noted. What are your next tactics?

1. endoprosthetics;
2. prosthetics;
3. reconstructive surgery;
4. reosteosynthesis.

Response standard: 1. endoprosthetics;

Task 2. Instructions: Choose one correct answer.

To immobilize the hand for a fracture of the scaphoid, the following period is required:

1. 3 weeks;
2. 6 weeks;
3. 8 weeks;
4. 16 weeks.

Sample answer: 4. 16 weeks;

Task 3. Instructions: Choose one correct answer.

What type of surgical treatment is indicated for Nott's disease?

1. tendon plasty;
2. ligamentoplasty;
3. tenodesis;
4. ligamentotomy;
5. tenotomy.

Sample answer: 4. ligamentotomy;

Task 4. Instructions: Choose one correct answer.

4. The patient has a fracture of the femur in the distal third. What is special about performing skeletal traction?

1. skeletal traction on the tibial tuberosity;
2. skeletal traction for the supramalleolar region;
3. skeletal traction for the distal fragment of the femur;
4. skeletal traction for the distal fragment of the femur and bend the leg in knee joint;
5. skeletal traction for the distal fragment of the femur and apply lateral traction.

Sample answer: 4. skeletal traction for the distal fragment of the femur and bend your leg at the knee joint;

Task 5. Instructions: Choose one correct answer.

Which clavicle fracture is not an absolute indication for surgery?

treatment:

1. comminuted fracture;
2. open fracture;
3. oblique fracture with unsatisfactory alignment of bone fragments;
4. comminuted fracture with the lower fragment rotated at an angle of 90°;
5. oblique fracture of the clavicle with symptoms of paresthesia in the distal part of the upper limbs on the injured side.

Sample answer: 1. comminuted fracture;

Task 6. Instructions: Choose one correct answer.

What is not an indication for surgical treatment of clavicle fractures? 1.

1. threat of damage to the neurovascular bundle;
2. threat of skin breakout with fragments;
3. signs of pressure from fragments on the brachial plexus;
4. the presence of callus pressing on the brachial plexus.
5. a period of more than 3 days that has passed since the fracture.

Sample answer: 5. more than 3 days have passed since the fracture;

Task 7. Instructions: Choose one correct answer.

A patient came to you with a subungual hematoma of the third finger. What amount of treatment do you do you think is optimal?

1. immobilization, UHF therapy;
2. removal of the nail plate, immobilization;
3. UHF therapy, compresses with hypertonic solution;
4. fenestration of the nail plate.

Sample answer: 4. fenestration of the nail plate;

Task 8. Instructions: Choose one correct answer.

During osteosynthesis of an intermediary fracture of the femoral neck, the distance from the cortical layer of the subtrochanteric region to the acetabular pole of the head, measured on a radiograph, is 12 cm. What size screw do you use for osteosynthesis?

1. 8cm;
2. 9cm;
3. 10cm;
4. 11cm;
5. 12cm;

Standard answer: 3. 10cm;

Task 9. Instructions: Choose one correct answer.

Temporary stopping of bleeding includes the following methods, except 1.
application of a tourniquet
2. tight wound tamponade
3. pressure bandage
4. vascular suture
5. position of the clamp on the vessel.

Sample answer: 4. vascular suture;

Task 10. Instructions: Choose one correct answer.

Name the manipulation that is performed first when repositioning fractures queue.

1. Elimination of angular and width displacement;
2. Elimination of rotational and angular displacement
3. Elimination of subluxation in the joint
4. Elimination of length offset
5. Eliminate width offset

Sample answer: 2. Elimination of rotational and angular displacement;

Task 11. Instructions: Choose one correct answer.

Name the injury for which emergency hospitalization of the patient indications are not required.

1. Closed fracture of the surgical neck of the humerus
2. Fracture of 6–8 ribs on the right
3. Displaced fracture of both tibia bones
4. Hip dislocation
5. Mild brain contusion.

Sample answer: 1. Closed fracture of the surgical neck of the humerus;

Task 12. Instructions: Choose one correct answer.

The optimal volume of emergency care in the central district hospital for a patient with a closed fracture of the diaphysis of the left femur in the middle third with displacement of fragments.

1. Administration of analgin and diphenhydramine. Hospitalization. Giving the limb an antalgic position in bed.
2. Anesthetize the fracture site with novocaine solution. Immobilization with plaster splints.
3. Anesthesia of the fracture site. Infusion therapy. Application of skeletal traction.
4. Open reduction under anesthesia. Intramedullary osteosynthesis. Coxite plaster cast.
5. Closed manual reduction under short-term hexenal anesthesia. Application of a coxite plaster cast.

Sample answer: 3. Anesthesia of the fracture site. Infusion therapy. Overlay skeletal traction;

Task 13. Instructions: Choose one correct answer.

In the evening, an operating otolaryngologist is on duty at the district hospital. A patient was admitted with an open fracture of the tibia bones with displacement. What should the doctor on duty do?

1. Apply an aseptic bandage to the wound, immobilize the limb with a posterior plaster splint, hospitalize the patient, and fill out a medical history.

2. Toilet the skin around the wound, apply a tight bandage. Manual reposition of fragments.
Application of a circular plaster cast.
3. X-ray of the fracture area. Primary surgical treatment of a fracture without reposition and fixation of fragments. Circular plaster cast. Control radiography in plaster.
4. Stop bleeding. Treat the edges of the wound with tincture of iodine. Apply an aseptic bandage and splint. Administer drugs and antitetanus serum. Take an x-ray. Urgently call a surgeon trained in traumatology to the hospital.
5. Apply a pressure bandage to the wound, administer Omnopon and antibiotics in a large dose. Immobilize with a posterior splint. Prepare the patient for surgery the next morning.

Sample answer: 4. Stop the bleeding. Treat the edges of the wound with tincture of iodine. Apply an aseptic bandage and splint. Administer drugs and antitetanus serum. Take an x-ray. Urgently call a surgeon trained in traumatology to the hospital;

Task 14. Instructions: Choose one correct answer.

Specify the means that creates the greatest rigidity of fixation in the treatment of fractures

1. Skeletal traction system
2. Plastic splint (orthosis)
3. Dieterichs splint
4. Longuet-circular plaster cast.
5. Compression-distraction device.

Standard answer: 5. Compression-distraction device;

Task 15. Instructions: Choose one correct answer.

Name the segment of the musculoskeletal system on which application Ilizarov compression-distraction apparatus is most often practiced

1. Ankle joint
2. Knee joint
3. Thigh
4. Shin
5. Shoulder

Sample answer: 4. Shin;

Task 16. Instructions: Choose one correct answer.

Name the injury for which a functional method can be used to treat treatment.

1. Fracture of the radius in the middle third
2. Displaced patella fracture
3. Fracture of both ankles, subluxation of the foot outwards
4. Impacted closed fracture of the humeral neck
5. Forearm dislocation

Sample answer: 4. Impacted closed fracture of the humeral neck;

Task 17. Instructions: Choose one correct answer.

Nature of a clavicle fracture for which surgical treatment is not performed

1. Transverse fracture
2. Fracture without displacement
3. Comminuted fracture
4. Oblique fracture
5. Spiral fracture

Standard answer: 2. Non-displaced fracture;

Task 18. Instructions: Choose one correct answer.

Select the absolute indication for surgical treatment of a clavicle fracture 1.

1. Closed transverse fracture in the middle third with displacement
2. Comminuted fracture in the middle third
3. Open (2B) fracture of the outer end of the clavicle
4. Closed fracture-dislocation of the acromial end of the clavicle
5. Subperiosteal fracture in a child with angular deformity

Sample answer: 3. Open (2B) fracture of the outer end of the clavicle;

Task 19. Instructions: Choose one correct answer.

The optimal method for treating chronic dislocations of the acromial end of the clavicle 1. Functional treatment

2. Open reduction, fixation of the clavicle to the acromion with metal structures
3. Plastic restoration of the ligamentous apparatus of the acromial joint
4. Plaster cast with screw connections
5. Resection of the acromial end of the clavicle.

Sample answer: 3. Plastic restoration of the acromial ligament apparatus joints;

Task 20. Instructions: Choose one correct answer.

A middle-aged man, very strong, came to the trauma center physically, with a shoulder dislocation 2 days ago. Two attempts at reduction under local anesthesia were unsuccessful. What should I do?

1. Repeat the reduction again using more physical force during manipulations
2. Perform open reduction surgery
3. Use the Dzhanelidze method
4. Reduce the dislocation in a hospital setting under short-term anesthesia
5. Preliminarily apply skeletal traction to eliminate retraction of the muscles of the shoulder girdle

Sample answer: 4. Reduce the dislocation in a hospital setting under short-term anesthesia;

Task 21. Instructions: Choose one correct answer.

What are contraindications to external osteosynthesis?

1. Modern technologies make it possible to perform osteosynthesis in any conditions.
2. Severe osteoporosis, severe open fractures, infected fractures, extensive skin scars, fistulas, osteomyelitis.

Sample answer: 2. Severe osteoporosis, open severe fractures, infected fractures, extensive skin scars, fistulas, osteomyelitis.;

Task 22. Instructions: Choose one correct answer.

What is the main question when determining indications for osteosynthesis surgery? 1. Does the surgeon have the required sizes of fixators at his disposal? 2. Will osteosynthesis provide a better result than conservative treatment?

Standard answer: 2. Will osteosynthesis produce a better result than conservative treatment?

Task 23. Instructions: Choose one correct answer.

Name the phases of treatment with permanent skeletal traction for long fractures tubular bones and the duration of each of them.

1. a) Reposition phase. b) Stabilization phase.

2. a) Repositioning - from 0 to 3 days. b) Retention - 2-3 weeks. c) Reparation - 2-4 weeks.

Standard answer: 2. a) Repositioning - from 0 to 3 days. b) Retention - 2-3 weeks. V) Reparation - 2-4 weeks;

Task 24. Instructions: Choose one correct answer.

What are contraindications to external osteosynthesis?

3. Modern technologies make it possible to perform osteosynthesis in any conditions.

4. Severe osteoporosis, severe open fractures, infected fractures, extensive skin scars, fistulas, osteomyelitis.

Sample answer: 4. Severe osteoporosis, open severe fractures, infected fractures, extensive skin scars, fistulas, osteomyelitis;

Task 25. Instructions: Choose one correct answer.

Is diabetes an absolute contraindication for surgery? osteosynthea in elderly patients?

1. Diabetes mellitus is a relative contraindication for osteosynthesis operations in elderly patients. The operation is not indicated for uncompensated severe and (or) complicated forms of diabetes.

2. Diabetes mellitus is an absolute contraindication for internal and extrafocal osteosynthesis.

Sample answer: 1. Diabetes mellitus is a relative contraindication for osteosynthesis operations in elderly patients. The operation is not indicated for uncompensated severe and (or) complicated forms of diabetes.

OPK-7:

Open type tasks: TOTAL 75 tasks

Addition task. Total 10 tasks

Task 1. Instructions. Instead of a dash, enter only one correct word.

A persistent limitation of active and passive movements in a joint caused by changes, shortening of extra-articular or articular soft tissues, cartilage or bone structures is

_____.

Correct answer: contracture

Task 2. Instructions. Instead of a dash, enter only one correct word.

A group of congenital and acquired diseases, the leading symptoms of which are neck deformities and incorrect/vicious head position is called _____.

Correct answer: torticollis

Task 3. Instructions. Instead of a dash, enter only one correct word.

Repeated persistent separation of the articular surfaces of the head of the humerus and the glenoid cavity of the scapula, which occurs after a common traumatic dislocation of the shoulder, is called

_____.

Correct answer: habitual shoulder dislocation

Task 4. Instructions. Instead of a dash, enter only one correct word.

A disease of the hand, which is characterized by a typical "snapping" of the finger or fingers at maximum flexion into a fist, limitation of movements, pain at the base of the fingers when pressing, morning stiffness of movements in the hand, is called

_____.

Correct answer: stenosing ligamentitis

Task 5. Instructions. Instead of a dash, enter only one correct word.

A non-inflammatory disease, the cause of which is cicatricial degeneration of the palmar aponeurosis, leading to limitation of movements of the fingers, is called _____.

Correct answer: Dupuytren's contracture

Task 6. Instructions. Instead of a dash, enter only one correct word.

When diagnosing injuries and diseases of the hip joint, radiography is performed in a direct and _____ projection.

Correct answer: axial

Task 7. Instructions. Instead of a dash, enter only one correct word.

Persistent adduction-flexion-supination contracture of the foot, associated with congenital underdevelopment and shortening of the internal and posterior muscle groups and ligaments of the lower leg, is called _____.

Correct answer: congenital clubfoot.

Task 8. Instructions. Instead of a dash, enter only one correct word.

Deformation of the foot, characterized by persistent flattening, i.e., a decrease in the height of its longitudinal arch, is called _____.

Correct answer: longitudinal flatfoot

Task 9. Instructions. Instead of a dash, enter only one correct word.

A polygenically inherited complex three-dimensional twisting deformity of the spine is called _____.

Correct answer: idiopathic scoliosis

Task 10. Instructions. Instead of a dash, enter only one correct word.

A chronic systemic disease of connective tissue, in which, as a result of the immunoinflammatory process, peripheral joints are predominantly affected with the development of erosive and destructive changes in them, is called _____.

Correct answer: rheumatoid arthritis

Interview questions 40 questions in total.

Question 1.

Depending on the participation of a particular tissue in the development of joint mobility disorders, name the types of contractures.

Reference answer:

Contractures can be dermatogenic (skin), desmogenic, tendogenic, myogenic, arthrogenic, osteogenic, neurogenic

Question 2.

List the absolute and relative indications for amputation.

Reference answer:

Absolute indications include irreversible processes in the limb and the ineffectiveness of conservative treatment methods: gangrene of the limb of various etiologies, necrosis of the limb; separation of a limb without the possibility of replantation.

Relative indications are malignant tumors; irreparable congenital, paralytic and post-traumatic deformities of the limb; long-term non-healing, not amenable to conservative treatment and steadily progressing extensive trophic ulcers; limb injuries, when 2/3 of all soft tissues are crushed, the bone is damaged over a significant extent, provided that the integrity of the supplying neurovascular bundles is maintained.

Question 3.

List the methods for closing a bone cut during amputation.

Reference answer:

According to the type of closure of the bone sawdust, the following methods are distinguished: fascioplactic - covering occurs with the help of fascia; tendoplasty - covering due to muscle tendon; osteoplasty - covering with bone and periosteum; myoplasty - covering by stitching antagonist muscles; combined - (fascioperiostoplasty, fascio-ostoplasty, fasciomyoplasty).

Question 4.

List the signs of congenital muscular torticollis in newborns.

Reference answer:

Signs of congenital muscular torticollis in newborns: when examining the child, a tilt of the head forward or to the side is visible; the sternocleidomastoid muscle may be enlarged; when trying to turn the child's head in the opposite direction, the baby cries and resists; Most often, there is asymmetry of the face - the eye, eyebrow and ear on the side of the inclination are located lower than usual.

Question 5.

Describe the visual findings of recurrent shoulder dislocation on clinical examination.

Reference answer:

With a habitual dislocation of the shoulder, a violation of the outlines of the joint (deformity) is determined; the appearance of a depression in an uncharacteristic place; subcutaneous protrusion of the head of the dislocated humerus; lengthening or shortening of the limb (depending on the type of dislocation); forced incorrect positioning of the upper limb, the most comfortable and gentle position for a patient with a dislocation, for example, support with a healthy hand.

Question 6.

Describe the surgical technique for stenosing ligamentitis (Nott's disease).

Reference answer:

Under local or general anesthesia, the orthopedist dissects the scarred annular ligament, which limits the movement of the tendon.

Question 7.

Describe the surgical technique for Dupuytren's contracture.

Reference answer:

Under local or general anesthesia, the orthopedist performs excision of the scarred palmar aponeurosis.

Question 8.

Define perilunate dislocation and lunate dislocation.

Reference answer:

Perilunar dislocation of the hand bones is a violation of the normal anatomical location of the lunate and capitate bones. Lunate luxation is the separation of the lunate from the capitate and radius.

Question 9.

In what projections is radiography performed when diagnosing perilunar dislocation and dislocation of the lunate?

Reference answer:

If perilunate dislocation or dislocation of the lunate is suspected, radiography is performed in anteroposterior, lateral and oblique projections.

Question 10.

What complications can occur with perilunate dislocation or lunate dislocation?

Reference answer:

If perilunate hand dislocation and lunate dislocation are not quickly diagnosed and treated, complications can develop. These include: median nerve injury; avascular necrosis of the scaphoid or lunate and joint damage (scapholunate progressive collapse).

Question 11.

List the symptoms of a hip dislocation.

Reference answer:

For everyone species dislocations hips typical forced position limbs, deformation of the hip joint, more or less pronounced shortening of the limb on the side of the injury. Passive movements in the hip joint are painful, sharply limited, and accompanied by springy resistance. Active movements are impossible.

Question 12.

What additional injuries are associated with central hip dislocation?

Reference answer:

Central hip dislocation is accompanied by a fracture of the acetabulum.

Question 13.

List the symptoms characteristic of congenital hip dislocation in children of the first year of life.

Reference answer:

Symptoms of congenital hip dislocation in children of the first year of life are: asymmetry of skin folds; external rotation of the leg; shortening of the leg; limitation of leg abduction; "click" symptom - when trying to bring the thigh to the baby's tummy, a characteristic click is heard in the hip area.

Question 14.

List the symptoms characteristic of congenital hip dislocation in children older than one year.

Reference answer:

Late symptoms of congenital hip dislocation are: late onset of walking; merciless lameness on the sore leg; the tip of the greater trochanter is above the Roser-Nelaton line; positive Trendelenburg sign; increased lumbar lordosis; symptom of non-disappearing pulse; Radulescu's symptom (sensation of the femoral head during rotational movements); Erlacher's symptom (maximally bent painful leg at the hip and knee joint touches the abdomen in an oblique direction); Ettore's symptom (the maximally abducted dislocated leg crosses the healthy leg at the level of the mid-thigh, while the healthy leg crosses the sick leg at the knee joint); deviation of the Shemaker line (the line connecting the apex of the greater trochanter and the anterior superior pelvic spine passes through the navel, and in case of dislocation, below it).

Question 15.

List the orthopedic devices used in the conservative treatment of congenital hip dislocation in children.

Reference answer:

Wide swaddling; soft Pavlik stirrups; Freika cushion (tire); functional rigid plaster casts; outlet tires.

Question 16.

Name the main types of surgical interventions in the treatment of congenital hip dislocation in adults.

Reference answer:

In the treatment of congenital hip dislocation in adults, surgical interventions such as varus (valgusation) osteotomies are performed to create a roof of the acetabulum in order to increase support for the femoral head. As well as hip replacement.

Question 17.

What are the main stages in the treatment of clubfoot using the Ponseti method?

Reference answer:

Treatment using the Ponseti method consists of three main stages: correcting the deformity with plaster casts, lengthening the Achilles tendon and securing the result with abduction splints - braces.

Question 18.

Name the typical signs of longitudinal flatfoot.

Reference answer:

Foot deformity with longitudinal flatfoot is characterized by the following typical features: relative elongation of the foot and expansion of its middle section; a pronounced decrease or complete disappearance of the longitudinal arch (the foot rests on its entire plantar surface); abduction (abduction) of the forefoot (toe points outward); pronation (outward deviation) of the heel bone over 5-6°.

Question 19.

How is an X-ray examination performed for longitudinal flat feet? What parameters are measured?

Reference answer:

X-ray examination of longitudinal flatfoot is performed on a special stand under conditions of natural static load (with the subject standing in two positions). On a lateral radiograph of the foot, the height and angle of the longitudinal arch of the foot (scaphoid arch) are measured.

Question 20.

Name the typical signs of transverse flatfoot.

Reference answer:

The following signs are characteristic of foot deformation with transverse flatfoot: expansion of the forefoot; corns on the sole under the heads of the middle metatarsal bones; valgus deviation of the first finger with its internal (pronation) rotation; osteochondral exostosis of the head of the first metatarsal bone with signs of chronic bursitis; hammertoe deformity of the middle toes, accompanied by pronounced tension under the skin of the extensor tendons and the formation of painful calluses along the back of the deformed toes; varus deviation of the fifth finger with the presence of exostosis and bursitis.

Question 21.

Explain the terms hallux valgus.

Reference answer:

Progression of medial deviation of the first metatarsal bone leads to subluxation and dislocation of the sesamoid bones. They shift to the region of the first intermetatarsal space. Since the sesamoid bones are included in the tendons of both heads of the flexor pollicis brevis, and the tendon of the flexor pollicis longus is firmly fixed between them, there is an outward displacement of these tendons. Thus, the head of the first metatarsal bone separates from its "hammock". As a result, the flexors and extensors of the first finger additionally acquire an unusual function of abductors, leading to valgus deviation of the finger (hallux valgus)

Question 22.

What is the Risser test?

Reference answer:

Risser test. Ossification of the epiphyses of the iliac crests begins in the region of the anterior superior spine and continues dorsally to the posterior superior spine for an average of two years. According to Risser, the iliac crest is divided into 4 parts, and the staged process is as follows: Risser-0 (no shadow of the epiphysis), Risser-1 (ossification within 25% of the crest), Risser-2 (ossification within 50% of the crest), Risser-3 (ossification within 75% of the crest), Risser-4 (complete ossification of the crest), Risser-5 (fusion of the epiphysis and the body of the ilium). Risser-4 corresponds to the completion of growth of the spinal column.

Question 23.

Give a classification of scoliosis according to the magnitude of the deformation.

Reference answer:

I Art. — 0-10°, II stage. — 10-25°, III degree. — 25-50°, IV century. → 50°.

Question 24.

Describe the clinical signs of scoliotic disease.

Reference answer:

The main clinical manifestation of the disease is the presence of spinal deformity, which may be accompanied by the following clinical signs: asymmetry of the contours of the neck; asymmetry of the spatial arrangement of the shoulder girdles; asymmetry of waist triangles; - "a symptom of the disappearance of the waist triangle in the lumbar region on the side of the deformity arc" according to A. Lorenz; asymmetry of the location of the blades; - "symptom of the position of the shoulder blades" according to I. A. Movshovich; - the presence of a convexity on one side in the form of a rib hump at the level of the thoracic or thoracolumbar region and a concavity on the opposite side in the flexion position in the lumbar region - Adams' symptom (W. Adams); the presence of a convexity in the form of a muscle roll - W. Schulthess-Chaklin's symptom on one side at the level of the lumbar region and concavity on the opposite side;

asymmetrical arrangement of ridges

iliac bones and gluteal regions; asymmetry of the Michaelis rhombus; asymmetry location of the clavicles, the symptom of "shortening of the clavicle" according to I. A. Movshovich; asymmetry of the shape and location of the mammary glands; arcuate arrangement of the spinous processes of the vertebrae; fixed change in the shape of the sagittal profile of the spine in variants of flattening physiological curves or the "doll" symptom according to A. Lorenz;

externally determined shortness of the body; detectable “functional symptom of the spinal extensor muscles”

Question 25.

List the methods of conservative treatment of scoliotic disease.

Reference answer:

In the conservative treatment of scoliotic disease, patients are recommended to perform exercise therapy, which involves the active use of the patient’s body’s physical resources and is aimed at: developing self-control of correct posture and movements (culture of physical behavior); muscle strengthening (formation of a “muscle” corset of the body); development of physical qualities; developing skills for self-correction and/or stabilization of spinal deformity; apply corset corrective treatment, especially rigid individual functional corrective corsets, both as an independent corrective treatment and to curb the progress of spinal deformity until the optimal, from the point of view of surgical treatment, completion of the formation of the skeleton.

Question 26.

Define the concept of cerebral palsy

Reference answer:

Cerebral palsy (CP) is a concept that unites a group of movement disorders that arise as a result of damage to various brain structures in the perinatal period. Cerebral palsy may include mono-, hemi-, para-, tetra-paralysis and paresis, pathological changes in muscle tone, hyperkinesis, speech disorders, unsteadiness of gait, motor coordination disorders, frequent falls, and retardation of the child in motor and mental development. With cerebral palsy, intellectual impairment, mental disorders, epilepsy, hearing and vision impairment may occur.

Question 27.

List the early clinical manifestations of cerebral palsy.

Reference answer:

Early manifestations of cerebral palsy: delayed motor and psycho-speech development; absence or delayed reduction of congenital reflexes; delayed or lack of development

installation reflexes; muscle tone disorders; increased tendon reflexes; the appearance of pathological synkinesis, when voluntary movement of some muscles causes simultaneous involuntary contraction of other muscles; formation of pathological settings (flexion-pronator position of the arms, adductor position of the hip, etc.).

Question 28.

Name the indications for surgical treatment and types of operations performed for cerebral palsy

Reference answer:

Indications for surgical treatment of cerebral palsy are contractures formed as a result of prolonged muscle spasticity and limiting the patient's motor activity. Most often, in case of cerebral palsy, tenotomies are used, aimed at creating a supporting position for the paralyzed limb. To stabilize the skeleton in cerebral palsy, bone lengthening, tendon transfer, and other operations can be used. If cerebral palsy manifests itself as severe symmetrical muscle spasticity, leading to the development of contractures and pain, then to interrupt the pathological impulses coming from the spinal cord, the patient with cerebral palsy can undergo a spinal rhizotomy.

Question 29.

List the objectives of treating patients with polio.

Reference answer:

The objectives of treating patients with polio are:

1. In the acute period, at the beginning of the paralytic stage, the limbs are placed in a functionally advantageous position. To do this, use bed placement with the help of roller-shaped weights on the area of the knee joints, footrests, plaster and plastic splints.
2. In the recovery stage, the treatment of contractures that have arisen is carried out and the prevention of newly occurring contractures and deformations as a result of loss of function of various muscle groups is carried out, and optimal conditions are created for the restoration of the affected muscle groups.
3. In the residual stage, treatment includes physical, labor, social and domestic rehabilitation. The patient should be able to take care of himself, free himself from orthopedic devices, and find his place in working life.

Question 30.

List the factors in the pathogenesis of osteoarthritis.

Reference answer:

The main factors of pathogenesis include the following: disruption of the metabolism of chondrocytes and the matrix of articular cartilage: insufficient synthesis of proteoglycans by chondrocytes, quantitative and qualitative disturbance of proteoglycan aggregates; disruption of the structure of collagen with a decrease in its resistance to mechanical stress: activation of collagenase, phospholipase A2; synthesis of pro-inflammatory cytokines, under the influence of which chondrocytes synthesize matrix proteinases, causing degradation of collagen and cartilage proteoglycans; overexpression of COX-2, inducing the synthesis of prostaglandins involved in the development of inflammation; overexpression of an inducible form of nitric oxide synthetase, which regulates the formation of nitric oxide, which has a toxic effect on cartilage; impaired synthesis of insulin-like growth factor-1 (anabolic mediator); disruption of the synthesis of transforming growth factor (anabolic mediator); impaired blood circulation in articular tissues (synovial membrane, subchondral bone); synovitis

Question 31.

What are the main clinical manifestations of osteoarthritis?

Reference answer:

The main clinical manifestations of OA include pain, morning stiffness, local pain on palpation, and joint stiffness.

Question 32

List the methods of surgical treatment of patients with deforming arthrosis of large joints.

Reference answer:

Subchondral tunneling, osteoperforation; arthroscopic lavage, debridement; corrective osteotomies; mosaic chondroplasty; endoprosthetics; arthrodesis.

Question 33

What is arthrodesis?

Reference answer:

Arthrodesis is a surgical operation aimed at complete immobilization of the affected joint, which is not amenable to therapeutic treatment and cannot be replaced by endoprosthetics. If such a joint causes pain and does not provide supporting and motor function, it makes sense to consider the possibility of arthrodesis. It is important to understand that this is an extreme case when other methods are not effective. The absence of friction stops the destruction of the joint and relieves pain. But after immobilization, the joint fuses forever in one position.

Question 34

What is endoprosthetics?

Reference answer:

Endoprosthetics is a high-tech operation that involves implanting a device (endoprosthesis) that imitates the function of a healthy joint. Endoprosthesis replacement is performed in case of joint damage as a result of injury or chronic degenerative disease.

Question 35

List non-drug methods for treating osteoarthritis.

Reference answer:

Non-drug methods of treating osteoarthritis include protective regimen, joint unloading, wearing orthoses, braces, physical therapy, mechanotherapy, osteopathy, physiotherapy, and balneotherapy.

Question 36

List the primary osteogenic tumors, benign and malignant.

Reference answer:

Primary osteogenic tumors. 1. Benign tumors: osteoma; osteoid – osteoma; solitary bone cyst; osteoblastoclastoma; chondroma. 2. Malignant tumors: osteogenic sarcoma; chondrosarcoma of bone.

Question 37

List the primary non-osteogenic tumors, benign and malignant.

Reference answer:

Primary non-osteogenic tumors. 1. Benign tumors: non-osteogenic fibroma; bone hemangioma. 2. Malignant tumors: Ewing tumor; reticulocellular sarcoma of bone; multiple myeloma.

Question 38

List the instrumental studies performed for bone tumors.

Reference answer:

For bone tumors, the following instrumental studies are performed: radiography; radioisotope diagnostics; computed and magnetic resonance imaging; positron emission tomography; angiography; sonography.

Question 39

List the types of biopsy for tumors of bones and joints.

Reference answer:

There are puncture, aspiration, trepanation, open and extended biopsies.

Question 40

List the types of surgical interventions performed for bone tumors.

Reference answer:

Saving or saving operations: esochleation - curettage or curettage of the tumor; marginal tumor resection - marginal tumor removal en bloc; segmental resection - wide removal of the tumor en bloc; resection of one of the articular sections; resection of the entire joint. Destructive operations: amputation, disarticulation.

Situational tasks 25 tasks in total

Task 1.

Patient M., 65 years old, fell on the street, hitting her shoulder. I felt a sharp pain in the upper third of my shoulder. The opposite hand holds the injured arm by the forearm. At the same time, he presses it tightly to the body.

Make a preliminary diagnosis.

Sample answer:

The presumptive diagnosis is that with this mechanism of injury, a fracture of the surgical neck of the humerus occurs in women over 60 years of age against the background of postmenopausal osteoporosis.

Task 2.

A young man cannot use his arm after a fall. Pathological mobility is determined at the border of the middle and lower third of the shoulder.

What motor functions need to be examined to exclude a possible complication in this location of the humerus fracture? What could be the nature of this complication?

Sample answer:

In fractures of the humerus in this location, the radial nerve is most often damaged. In this case, there is no active extension of the hand, especially extension of the first finger. The radial nerve may be compressed or completely damaged. With complete damage to the radial nerve, all types of sensitivity in the zone of autonomous innervation on the hand are absent.

Problem 3.

Having fallen on his outstretched arm, the patient felt a sharp pain in his shoulder. The forced, unnatural position is striking - shoulder abduction.

Make a preliminary diagnosis.

Standard answer.

This mechanism of injury and the described forced position indicate an anteroinferior dislocation of the shoulder. When attempting to passively adduct the shoulder, a springy fixation is noted.

Task 4.

The emergency doctor diagnosed the victim in a traffic accident as: "Open comminuted fracture (3 B) of both bones of the right forearm at the level of the proximal third with displacement." Given the bleeding from the wound, a pulsating stream, a tourniquet was applied to the middle third of the right shoulder. After removing temporary immobilization, an orthopedic traumatologist diagnosed limited dorsal movement of the hand and hypoesthesia in the distal forearm.

Make a preliminary diagnosis of the complication that has arisen.

Standard answer.

A possible cause of this complication is compression of the radial nerve in the shoulder. The emergency doctor placed a tourniquet tightly on the shoulder without padding. In addition, a tourniquet was placed where the radial nerve is closest to the humerus (the groove in the humerus for the radial nerve). Perhaps the tourniquet should have been applied a little more proximally. The radial nerve innervates all extensors of the shoulder and forearm, and the brachioradialis muscle. If it is damaged in the middle or distal third of the shoulder, the hand and fingers hang down, there is no active extension of the hand and fingers, extension and abduction of the first finger. Supination of the forearm is impaired. Loss of pain sensitivity varies. Most often, zones of hypoesthesia are detected on the back of the hand in the area of the anatomical snuffbox and on the back of the main phalanx of the first finger.

Task 5.

The patient developed swelling along the palmar surface of the hand in the projection of the second metacarpophalangeal joint after unusual physical work. After 2 days, pain appeared when bending the 2nd finger in the area of swelling on the palmar surface of the hand. This complication is associated with annular ligaments surrounding the flexor tendons. While working in the garden, the patient injured this area and swelling and inflammation occurred.

Make a preliminary diagnosis.

Standard answer.

This disease is called Knott's disease or stenosing ligamentitis. Knott's disease is diagnosed when, due to the inflammatory process, the space under the sheath surrounding the tendon narrows. In severe cases, the finger remains bent. Sometimes patients notice a clicking sound or a clicking sensation when moving a finger. This disease cannot be explained by nerve damage.

Task 6.

When the patient fell, he felt a click and pain occurred in the proximal part of the shoulder. Movements became sharply limited and painful. On examination, the shoulder is abducted, and there is retraction of the soft tissues in the area of the shoulder joint. The pulsation of blood vessels in the arm has become weakened. The function of the limb is completely impaired.

Make a preliminary diagnosis.

Standard answer.

The patient suffered a dislocation of the shoulder, as evidenced by the retraction of the soft tissues, indicating that the head of the humerus is not in the shoulder joint (Lezhar's sign). With anterior dislocations, the head is displaced anteriorly and is located under the collarbone or under the coracoid process. The axis of the shoulder is shifted inward. The victim's head and torso are tilted towards the injury. Active and passive movements in the joint are sharply limited. The symptom of spring resistance is positive. The dislocation led to swelling, muscle tension and compression of the neurovascular bundle, and this can explain the weakening of pulsation and pain. Impaired sensitivity and blood circulation in the limbs, possible numbness, tingling, as a result of damage to nerves and blood vessels.

Task 7.

The patient suffered a fracture of 3 metacarpal bones. At the trauma center, the doctor on duty under local anesthesia performed primary surgical treatment of the wound and osteosynthesis with knitting needles, applied a plaster cast and sent the patient home.

Did the doctor have the right to operate on such a fracture in a trauma center?

Standard answer.

The doctor at the trauma center did not have the right to operate on such a patient at the trauma center. This rule is regulated in the list of the volume of assistance provided in trauma centers. There you can only operate on fractures of 1–2 metacarpal bones. And fractures of the 3 metacarpal bones lead to loss of the skeleton function of the hand and are recommended to be treated in a hospital. Moreover, with an open fracture, antibacterial therapy and constant monitoring of the condition of the wound are necessary.

Task 8.

During the explosion of a gas cylinder, a 45-year-old man was crushed on his right shin and feet by a concrete slab of a collapsed house. The victim was removed from the rubble only 4 hours later. And they quickly took us to the nearest hospital (a distance of 60 km) in order to meet the “golden hour rule” in time. Immediately in the ambulance, the patient was given painkillers, blood pressure was measured, immobilization was applied, and then a tourniquet was applied to the thigh. In the car, the limb was examined: the skin of the limb was cyanotic, swelling of the thigh (plus 4 cm), significant swelling of the lower leg and foot (plus 10 cm), blood pressure 120/80, pulse 85 per minute.

Identify errors in the actions of the ambulance crew?

Standard answer.

The patient has Long-Term Compartment Syndrome. The danger of this syndrome is associated not only with a severely injured limb, for which one still has to fight to save it, but this syndrome is also dangerous for the life of the victim. This is due to prolonged compression of the limb, in which blood circulation was blocked with the formation of toxins. When released from the rubble, the immediate influx of toxins can lead to catastrophic consequences. Therefore, the mistake was that the tourniquet was applied late. The patient in this case developed endotoxemia. Metabolic acidosis and the entry of myoglobin into the blood leads to blockage of the kidney tubules and stretching of the kidney capsule with pain. Immobilization should also be applied before transporting the patient. It is understandable that the ambulance doctors want to deliver the patient to a specialized department for anti-shock, detoxification therapy, extracorporeal detoxification (plasmapheresis) and hyperbaric oxygenation as quickly as possible.

Task 9.

The patient received a spiral fracture of the humerus with a large fracture plane approximately 10 cm in length. After the operation of external osteosynthesis on the humerus for a spiral fracture of the humerus, the patient’s hand began to be unable to straighten.

What complication did the patient experience?

Standard answer.

During the operation, it was necessary to isolate the humerus along a significant length. For reposition, it was necessary to reposition the fracture with considerable effort, eliminating the mixing of bone fragments along the length. Traumatic reposition led to injury to the radial nerve. Since the nerve passes in the groove of the same name in the humerus and fits tightly to it, therefore, when the fragments are stretched, it is stretched and damaged.

Problem 10.

The man was hit on the left side of the pelvis and thigh in the accident. At the time of examination, the symptom of a "stuck heel" is determined, increased pain with slight compression of the wings of the iliac bones. Pulse 110 beats per minute, blood pressure 100 to 60 mmHg. pillar

If you are an emergency physician, determine the procedure for providing care to the patient.

Standard answer.

Based on the circumstances of the injury and clinical data, the emergency doctor diagnosed the victim with a fracture of the pelvic bones. If the pelvic bones are fractured, the patient must be placed on a board or a rigid stretcher. In this case, you should put him on his back with his legs bent and give him a comfortable position. Then, place bolsters under the knees; in case of fractures of the spine, pelvic bones, or severe multiple injuries, use vacuum immobilization stretchers. Anti-shock measures are begun aimed at relieving pain and raising blood pressure.

Problem 11.

When examining a patient who had sustained a knee joint injury while playing football, the doctor identified excessive lateral deviation of the tibia and identified pain along the medial lateral surface of the knee joint.

Which knee ligaments can be considered damaged? What techniques do you use to diagnose damage to the ligamentous apparatus of the knee joint? Is it necessary to carry out additional x-ray examination? Will CT and MRI studies be helpful?

Standard answer.

When examining the patient, the doctor determined excessive lateral deviation of the tibia and identified pain along the medial lateral surface of the knee joint. Based on the mechanism of injury, due to excessive displacement of the tibia outward, damage to the medial collateral ligament can be suspected and

medial meniscus. Lateral stability is assessed in a position of full extension and slight flexion at an angle of 20°. As long as the integrity of the posterior capsule and posterior cruciate ligament is maintained, there is no evidence of instability in the full extension position, even with damage to the medial collateral ligament. With slight flexion of 20°, the posterior capsule relaxes. Applying valgus force in this position allows the integrity of the medial collateral ligament to be assessed. The anterior cruciate ligament can often be damaged. It is not for nothing that there is such a thing as an “unhappy triad”, which is very often found in team sports and alpine skiing. CT and MRI studies will be useful to help identify hidden fractures and damage to the capsular-ligamentous apparatus of the knee joint

Problem 12.

During the collision with the car, the driver hit his knee on the dashboard. Felt pain along the anterior surface of the proximal third of the thigh. After some time, he began to notice a limitation in the active extension of the lower leg.

Make a diagnosis. What damage is possible with this type of injury.

Standard answer.

If the patient feels pain along the anterior surface of the proximal third of the thigh after a blow to the knee joint, then it is necessary to carefully examine the muscles of the anterior thigh to diagnose damage to the quadriceps femoris muscle. It is especially necessary to examine the proximal femur for the presence of hematomas. The appearance of symptoms of limited active extension of the leg indicates damage to the femoral nerve innervating the quadriceps femoris muscle. To determine further tactics, it is advisable to perform a dynamic electromyographic study of this muscle. It may be possible to prescribe special treatment for nerve damage.

Problem 13.

While playing tennis, the patient felt a sharp pain in the right shoulder joint, which arose when reflecting the blow of the ball in a position of sharp abduction of the limb. The patient was unable to fully adduct the limb. When examined by a doctor, the spring resistance of the limb is determined.

What research needs to be done and what is the preliminary diagnosis?

Standard answer.

Anterior shoulder dislocation may be suspected. The preliminary diagnosis is based on the mechanism of injury, as well as dislocation of the head of the humerus, which is not in its proper position.

place, but palpable under the collarbone. To confirm the data of a clinical study, it is advisable to perform an X-ray examination and, having determined the dislocation, it is necessary to reduce the dislocation according to emergency indications. In the future, to diagnose hidden fractures and damage to the ligamentous apparatus, send the patient for CT and MRI.

Problem 14.

A young man fell off a motorcycle. Felt pain in the knee joint. I was able to get home. He applied cold to the bruise site. But I didn't sleep well at night because my knee joint hurt a lot. In the morning I went to the trauma center. X-rays revealed no fracture. The joint increased in volume by 5 cm.

What needs to be done to verify the diagnosis?

Standard answer.

The patient suffered a closed knee injury. X-rays revealed no fracture. The joint increased in volume by 5 cm. The patient experienced severe pain. To verify the diagnosis, the patient must undergo an MRI of the knee joint to exclude damage to the ligamentous apparatus and menisci.

Problem 15.

The victim in the accident was taken to the trauma department with emergency diagnoses; "Closed injury of the knee joint. Hemarthrosis." X-rays revealed no fracture. The joint has increased in volume by 7 cm. The symptom of "ballooning of the patella" is noted.

What needs to be done to clarify the diagnosis?

Standard answer.

In case of closed injury of the knee joint and suspected hemarthrosis, an X-ray examination must be performed. To reduce the intensity of the pain syndrome, it is necessary to perform a puncture of the knee joint and evacuate the spilled blood. If droplets of fat float in the blood, then the patient should be prescribed a CT and MRI. The appearance of droplets of fat in the blood indirectly confirms the fact of a violation of the integrity of the bone. In this case, it is necessary to eliminate the load on the limb and apply immobilization.

Problem 16.

An installer fell onto hard ground while working at a height of 7 meters. The patient was taken to the department of traumatology and orthopedics with complaints of pain in the heel bones. Based on the patient's complaints, the doctor on duty ordered an X-ray examination of the heel bones and pelvic bones.

Assess the completeness of the examination. What other damage is possible?

Standard answer.

With a catatrauma, feet down, the patient lands on his feet and in this case, a fracture of the bones of the foot occurs, most often the heels. Then the body drops and the pelvis is damaged, and the traumatic effect is transferred to the spine. Most often the 11th and 12th thoracic vertebrae and the 2nd lumbar vertebrae are damaged. Based on the complaints, the doctor ordered an X-ray examination of the heel bones and pelvis. The doctor on duty should be careful, examine the entire spine, and if palpation was painful, then order an x-ray. In addition, order an x-ray examination of not only the heel bones, but also the entire part of the right and left foot. Thus, errors were made during the examination of the patient. The thoracic and lumbar spine were not examined, and an X-ray examination of the entire foot area was not prescribed.

Problem 17.

An injured construction worker who fell from the 5th floor onto his back was admitted to the trauma department. The patient complained of pain in the ribs and lower back. The doctor on duty examined the patient in a sitting position. Palpation, flexion and rotation movements revealed an area of pain in the projection of the 2nd lumbar vertebra.

Has the victim been fully examined? Evaluate the doctor's actions.

Standard answer.

The doctor on duty examined the patient in a sitting position, although he should have suspected a spinal fracture based on the mechanism of injury. And this is prohibited. Patients with suspected spinal fractures should be examined lying down. Only light palpation is allowed. Rotational and bending forces are not allowed.

Problem 18.

The patient fell backwards on the stairs and hit the left side of her pelvis. The patient was examined by a doctor at home. The limb was in its normal position. Axial loading is moderately painful and the symptom of a "stuck heel" has been noted.

Determine the nature of the patient's injury

Standard answer.

In this situation, fractures of the pelvic bones are possible: the ischium, pubis or iliac wing on the left. The patient should be prescribed an X-ray examination of the pelvic bones and proximal left femur.

Problem 19.

The patient sprained his foot. I felt a sharp pain and a cracking sound on the outer surface of the ankle joint. After 2 days I went to the doctor. Radiographs were taken in 2 projections, but no bone pathology was detected. The doctor gave recommendations to limit the load on the limb, treated the lower leg with Iodine solution and sent the patient home without immobilization.

What diagnostic and tactical mistakes were made.

Standard answer.

The patient sprained his foot. I felt a sharp pain and a cracking sound on the outer surface of the ankle joint. No bone pathology was detected on radiographs. The doctor gave recommendations to limit the load on the limb. The tactics in this case are wrong. Since the doctor should suspect damage to the distal tibiofibular syndesmosis, it was necessary to perform special radiographs with placement on the syndesmosis in a position of slight internal rotation. In addition, it was necessary for the patient to be immobilized, even if the distal tibiofibular syndesmosis was intact. U
The patient may have had hidden injuries to the ankle ligaments.

Problem 20.

An 80-year-old patient with a fracture of the radius in a "typical location" received 2 plaster splints on the forearm and hand at the trauma center. The patient was sent home after X-rays were taken. In the morning she came in complaining of pain in her upper limb. Upon examination, swelling of the fingers was detected; the patient had difficulty moving her fingers. Skin sensitivity was reduced. When the bandage was removed, flexors of the forearm were detected, but pulsation was not detected. A week later, gangrene of the fingers was noted, and treatment ended with amputation at the level of the distal part of the forearm.

Explain the mechanism of the complication. Establish the reason and evaluate the actions of the doctor on duty.

Standard answer.

An 80-year-old patient with a fracture of the radius in a "typical location" received 2 plaster splints on the forearm and hand at the trauma center. After a week, this treatment ended with amputation. The treatment seemed to be correct. Successful reduction. Sick

Warned that the bandage may compress the forearm. But the doctor did not ask whether she lives alone or has relatives. Can he come to the emergency room at night? Is there a telephone? The patient lived in a dacha area. There were no neighbors. There is no phone. The compression started at 1 am. The pain was severe. The patient endured 6 hours until the morning and went to the emergency room as soon as buses began running. In this case, it was more logical to admit the patient to the department for paramedical (social) indications. In addition, the patient had diabetes mellitus and high blood pressure. When removing 2 splints, it turned out that they had joined together and formed a plaster cast. The plaster cast was made from wide bandages. There was no cotton-gauze spacer between the plaster splints. This was the reason for the compression. Although formally the bandage was applied from 2 splints.

Problem 21.

The patient had the fracture repositioned at the trauma center and plaster immobilization was applied. On the radiographs taken, the position of the bone fragments became satisfactory. Before removing the plaster immobilization, X-ray control after 6 weeks revealed displacement of bone fragments with an angular deformation of 45 degrees.

Why did this happen, point out the diagnostic and tactical error.

Standard answer.

The patient had the fracture repositioned at the trauma center and plaster immobilization was applied. On the radiographs taken, the position of the bone fragments became satisfactory. But given the fact that after a few days the patient's swelling decreases, the plaster cast dries out and the plaster immobilization may become loose and the need for tighter bandaging arises. According to the protocol, a control X-ray examination is to be performed in a week. This was not done to the patient. Displacement occurred within a week, but only after 6 weeks displacement of bone fragments with an angular deformation of 45 degrees was established.

Problem 22.

The patient suffered a closed oblique fracture of the femur at the level of the distal third. The doctor on duty applied traction at the level of the tibial tuberosity. The patient refuses the operation.

Evaluate the doctor's actions using the technique of applying skeletal damper traction to a segment of the lower leg? How will this affect the repositioning capabilities and function of the joint?

Standard answer.

The patient suffered a closed oblique fracture of the femur at the level of the distal third. Skeletal traction was applied at the level of the tibial tuberosity. This is justified if there is a wound or abrasion in the fracture area or if there is an intra-articular fracture. In this case, it was necessary to apply skeletal traction to the thigh. This is more physiological, since the function of the knee joint is not blocked by traction and the patient, while in traction, can perform a number of additional exercises to prevent vein thrombosis in the lower limb. In addition, by applying force when traction is applied to the damaged segment (thigh), the repositioning capabilities of skeletal traction are better than reposition through the leg segment.

Problem 23.

A 50-year-old patient, after applying the Ilizarov apparatus to his lower leg, developed shooting pains along the outer surface of his lower leg and foot. Conservative treatment did not bring relief to the patient.

Indicate possible ways of development of this symptomatology. The doctor's tactics were to remove the needle. Why was the Kirschner wire removed? How did the doctor determine that this particular wire (one of 8 wires) needs to be removed?

Standard answer.

When the Ilizarov apparatus was applied to the lower leg, the patient developed shooting pains along the outer surface of the lower leg and foot. Since the first wire for the proximal ring of the Ilizarov apparatus is passed distal to the head of the fibula along its anterior surface, and the peroneal nerve (n. peroneus) bends around the neck of the fibula from back to front. And if during the operation the wire is held a little more distally, then clinical neuritis may develop. In this case, the doctor taps the needles with a key and the patient feels increased pain due to vibration. The doctor's tactic is to remove the needle. But in this case, the stability of the Ilizarov apparatus design may decrease. It is advisable not only to remove the wire, but also to insert a new wire 1 cm proximal to the removed wire.

Problem 24.

A patient with a comminuted clavicle fracture was urgently taken to the operating room.

How can one explain such a rush?

Standard answer.

A patient with a comminuted clavicle fracture was urgently taken to the operating room. Indeed, there are such indications for the collarbone. First of all, this fragment can be located perpendicular to the axis of the clavicle and there is a real threat of damage to the neurovascular bundle. In this case, a clinical picture of brachial plexus irritation appears. There is another reason. One of the fragments is palpated under the skin with the threat of damaging the skin and turning a closed fracture into an open one. In case of a fracture of the neck of the scapula and collarbone, a so-called floating shoulder occurs. In this case, such instability requires surgical intervention, since there is a threat of thrombosis and damage to the neurovascular bundle.

Problem 25.

The patient was operated on for damage to the flexor tendons of the 2nd and 3rd fingers. After the tendons were sutured, a plaster cast was applied to his hand and forearm. After 1 month, the plaster immobilization was removed. The patient began to develop movements, but it was not possible to develop a persistent contracture of the fingers.

Explain the reason for this complication.

Standard answer.

The patient was operated on for damage to the flexor tendons of the 2nd and 3rd fingers. But the postoperative management of the patient was carried out with errors. The patient was not immobilized and did not undergo passive physical therapy. After 1 month, the plaster immobilization was removed, but a persistent contracture of the fingers had already formed. In addition, the immobilization period was overestimated. Usually 3 weeks is sufficient time for tendon fusion.

CRITERIA for assessing competencies and rating scales

Grade "unsatisfactory" (not accepted) or absence formation competencies	Grade "satisfactorily" (passed) or satisfactory (threshold) level of development competencies	Rated "good" (passed) or sufficient level development competencies	Excellent rating (passed) or high level development competencies
failure to student on one's own demonstrate	student demonstrates independence in application of knowledge	student demonstrates independent application of knowledge,	student demonstrates ability to full

<p>knowledge when solving assignments, lack independence in application of skills. Absence availability confirmation formation competencies indicates negative development results academic discipline</p>	<p>skills and abilities to solve educational tasks in full According to sample given teacher, by tasks, solution of which there were shown teacher, it should be considered that competence formed on satisfactory level.</p>	<p>skills and abilities when deciding tasks, tasks similar samples that confirms Availability formed competencies for higher level. Availability such competence on sufficient level indicates sustainable fixed practical skill</p>	<p>independence in choosing a method solutions non-standard assignments within disciplines with using knowledge, skills and skills, received as in development progress of this discipline, and adjacent disciplines should count competence formed on high level.</p>
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Criteria for assessing test control:

percentage of correct answers	Marks
91-100	Great
81-90	Fine
70-80	satisfactorily
Less than 70	unsatisfactory

When grading tasks with multiple correct answers, one error is allowed.

Interview assessment criteria:

Mark	Descriptors		
	strength of knowledge	ability to explain (introduce) the essence of phenomena, processes, do conclusions	logic and subsequence answer
Great	strength of knowledge, knowledge of basic processes subject matter being studied	high skill explain the essence phenomena, processes,	high logic and subsequence answer

	areas, the answer differs in depth and completeness disclosure of the topic; possession terminological apparatus; logic and consistency answer	events, draw conclusions and generalizations, give reasoned answers, give examples	
Fine	solid knowledge of the basic processes of the studied subject area, differs in depth and completeness of the topic; possession terminological apparatus; free mastery of monologue speech, but one or two inaccuracies in the answer are allowed	ability to explain essence, phenomena, processes, events, draw conclusions and generalizations, give reasoned answers, give examples; however one or two inaccuracies in the answer are allowed	logic and subsequence answer
satisfactory really	satisfactory process knowledge subject matter being studied areas, answer, different insufficient depth and completeness of the topic; knowledge of basic theoretical issues. Several are allowed errors in content answer	satisfactory ability to give reasoned answers and provide examples; satisfactorily formed analysis skills phenomena, processes. Several are allowed errors in content answer	satisfactory logic and subsequence answer
will not satisfy really	poor knowledge of the subject area being studied, shallow opening Topics; poor knowledge basic theoretical issues, poor analysis skills phenomena, processes. Serious errors in content answer	inability to give reasoned answers	absence logic and sequences answer

Criteria for assessing situational tasks:

Mark	Descriptors			
	understanding Problems	analysis situations	skills solutions situations	professional thinking
Great	complete implication problems. All requirements, submitted to	high benefit analyze situation, draw conclusions	high benefit select method solutions problems,	high level professional thoughts

	adania, completed		faithful solution skills situations	
Fine	complete implication problems. All requirements, submitted to adania, completed	benefit analyze situation, draw conclusions	benefit select method solutions problems faithful solution skills situations	residual level professional thoughts. drops one or two precision in the answer
satisfactory really	astastic implication problems. majority requirements declared to adania, completed	satisfactory 1st ability analyze situation, draw conclusions	satisfactory e skills solutions situations, falsity with choosing a method solutions to the problem	residual level professional thoughts. falls more a bunch of inaccuracies in answer or there is an error in the sequence solutions
will not satisfy really	misunderstanding problems. legs requirements, submitted to I hope not completed. No Tveta. Did not have experiments to solve hello	izkaya benefit analyze situation	insufficient solution skills situations	missing