

भारतीय प्रौद्योगिकी संस्थान रूड़की
Indian Institute of Technology Roorkee

RECRUITMENT EXAMINATION FOR
JUNIOR TECHNICAL SUPERINTENDENT (PATHOLOGY)

TIER-II

इस पुस्तिका में 8 पृष्ठ शामिल हैं।
This booklet consists of 8 pages.

अधिकतम अंक: 25
Maximum Marks: 25

समय: 60 मिनट
Time: 60 Minutes

Name of Candidate (CAPITAL LETTERS): _____
अभ्यर्थी का नाम

Roll Number: _____
अनुक्रमांक

Father's / Husband's Name: _____
पिता / पति का नाम

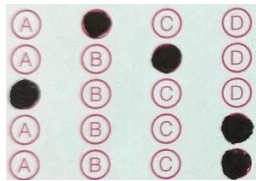
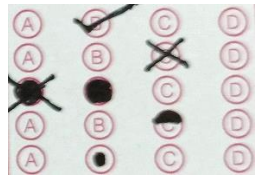
Date of Examination: _____
परीक्षा की तिथि

Signature of Candidate
अभ्यर्थी के हस्ताक्षर

Signature of Invigilator
निरीक्षक के हस्ताक्षर

INSTRUCTIONS TO CANDIDATES

1. This question paper has 25 questions. Each question carries one mark. There are four choices for answer (A, B, C, D) to each question. Choose the correct answer (one only) for each question and mark it on the Optical Response Sheet (ORS).
2. Questions have been set in English and Hindi, in case of discrepancy, the English version will prevail.
3. Read the instructions given in the ORS carefully.
4. Use a black pen only otherwise, ORS will not be evaluated.
5. Candidate must write Name, Roll No., Date of Examination, Booklet Code and sign on the ORS.
6. The candidate should check that the booklet does not have any unprinted or torn or missing pages or questions etc. If so, get it replaced with another question paper.
7. While marking your answer on the ORS, fully darken the circle. Answer once marked cannot be changed.
8. One (1) mark will be awarded for each correct answer and minus one by three ($-\frac{1}{3}$) mark for each incorrect answer. The unanswered questions will not attract negative marks.
9. Return the ORS to the invigilator after the examination is over.
10. Candidate is allowed to take away question paper after the examination.
11. Mobile and other Electronic Gadgets are prohibited in the examination. Watches of any kind are also not allowed.
12. Use of unfair means in examination will lead to cancellation of candidature.

CORRECT Method of Answering in ORS ORS में उत्तर देने का सही तरीका	WRONG Method of Answering in ORS ORS में उत्तर देने का गलत तरीका
	

उम्मीदवारों के लिए अनुदेश

1. इस प्रश्नपत्र में 25 प्रश्न हैं। प्रत्येक प्रश्न के उत्तर के लिए चार (A, B, C, D) विकल्प हैं। प्रत्येक प्रश्नके लिए सही उत्तर (केवल एक) चुनें और उसे Optical Response Sheet (ORS) शीट पर चिह्नित करें।
2. द्विभाषी प्रश्नों में कोई विसंगति होने की स्थिति में अंग्रेजी विवरण मान्य होगा।
3. ORS में दिए गए निर्देशों को ध्यान से पढ़ें।
4. केवल काले पेन का प्रयोग करें, अन्यथा ORS का मूल्यांकन नहीं किया जाएगा।
5. ORS शीट पर अपना नाम, रोल नंबर, परीक्षा की तिथि, पुस्तिका कोड लिखें और हस्ताक्षर करें।
6. उम्मीदवार को यह जांचना चाहिए कि इस पुस्तिका में कोई अमुद्रित या फटे या लापता पृष्ठ या प्रश्न आदि नहीं हैं। यदि ऐसा है, तो इसे एक नये प्रश्न पत्र से बदल लें।
7. ORS पर अपना उत्तर अंकित करते समय उस गोले को पूरी तरह से काला कर दें। एक बार अंकित उत्तर को बदला नहीं जा सकता।
8. प्रत्येक सही उत्तर के लिए एक (1) अंक प्राप्त होगा और प्रत्येक गलत उत्तर के लिए एक बटा तीन ($-\frac{1}{3}$) अंक घटा दिया जाएगा। अनुत्तरित प्रश्न नकारात्मक अंक आकर्षित नहीं करेंगे।
9. परीक्षा समाप्त होने के बाद ORS निरीक्षक को लौटा दें।
10. उम्मीदवार को परीक्षा के बाद प्रश्न पत्र अपने साथ ले जाने की अनुमति है।
11. परीक्षा में मोबाइल और अन्य इलेक्ट्रॉनिक गैजेट्स वर्जित हैं। किसी भी प्रकार की घड़ियों की भी अनुमति नहीं है।
12. परीक्षा में अनुचित साधनों के प्रयोग की स्थिति में उम्मीदवारी रद्द कर दी जाएगी।

(Objective type questions)
(वस्तुनिष्ठ प्रकार के प्रश्न)

Each question carries 1 mark
प्रत्येक प्रश्न के 1 अंक है

1. The correct order of steps of tissue processing is
 - A. fixation, clearing, dehydration, infiltration
 - B. fixation, infiltration, dehydration, clearing
 - C. fixation, dehydration, clearing, infiltration
 - D. fixation, embedding, clearing, dehydration

2. Which of the following is used as a histologic section adhesive in immunohistochemistry?
 - A. DAB
 - B. APES
 - C. DAPI
 - D. DPX

3. Which of the following is a type of delayed hemolytic transfusion reaction?
 - A. Anaphylaxis
 - B. Transfusion related lung injury
 - C. Transfusion associated circulatory overload
 - D. Kidd antibodies related effects

4. Certification by a duly recognized authority of the facilities, capability, competence and integrity of an agency is called
 - A. Accreditation
 - B. Proficiency testing
 - C. External quality assessment
 - D. Continuous quality improvement

5. Measurement of hemoglobin concentration is called
- A. Cyanmethaemoglobin method
 - B. Oxyhaemoglobin method
 - C. Sahli's acid-hematin method
 - D. All of the above
6. Stain not used to identify reticulocytes is
- A. Giemsa stain
 - B. New methylene blue
 - C. Azure B
 - D. Brilliant cresyl blue
7. Which of the following cannot be identified separately using a three-part automatic analyser?
- A. Granulocytes
 - B. Eosinophils
 - C. Lymphocytes
 - D. Monocytes
8. Technology used for differential count in automated analyzers include
- A. impedance with low-frequency electromagnetic current
 - B. impedance with radiofrequency current
 - C. impedance with low-frequency direct current
 - D. All of the above

9. Which of the following stain is not a Romanowsky stain?
- A. Jenner
 - B. Wright
 - C. Orcein
 - D. Leishman
10. Faulty staining resulting in unstained neutrophil granules result from
- A. Excess azure B
 - B. Insufficient azure B
 - C. Overused staining solution
 - D. Too low Buffer pH
11. Buffy coat films cannot detect
- A. Abnormal cells
 - B. Erythrophagocytosis
 - C. Parasites
 - D. Kupffer cell
12. Microcytic RBCs are not found in
- A. Iron deficiency anemia
 - B. Thalassaemia
 - C. Hydroxycarbamide (hydroxyurea) therapy
 - D. Anemia of chronic disease

13. Pseudothrombocytopenia occurs due to
- A. Platelet clumping
 - B. Immune thrombocytopenia
 - C. May-Hegglin anomaly
 - D. Bernard-Soulier syndrome
14. Raised ESR is seen in
- A. Polycythaemia
 - B. Hypofibrinogenaemia
 - C. Congestive cardiac failure
 - D. Anemia
15. Which of the following statement is FALSE regarding Heinz body?
- A. Composed of denatured hemoglobin
 - B. Observed in G6PD deficiency
 - C. Seen clearly using Romanowsky dyes
 - D. Visualized better using supravital staining
16. Needles used for bone marrow aspiration includes all, except
- A. Jamshidi trephine needle
 - B. Klima needle
 - C. Lumbar puncture needle
 - D. Salah needle

17. Slide test using 2% sodium metabisulphite is used for detecting
- A. Sickle cell anemia
 - B. Parasites
 - C. Fungal organisms
 - D. Iron deficiency anemia
18. Cause of isolated prolonged APTT include
- A. Inherited deficiency of factor VIII or factor IX
 - B. Vitamin K deficiency
 - C. DIC
 - D. Oral anticoagulant therapy
19. LE cells are
- A. Neutrophils showing prominent toxic granules
 - B. Neutrophil showing viral cytopathic effects
 - C. Dysplastic neutrophils
 - D. Neutrophil or macrophage that has phagocytized the denatured nuclear material of another cell
20. Antibody present in plasma in blood group O is
- A. Anti-B
 - B. Anti-A
 - C. None
 - D. both Anti-A and Anti-B

21. Which one among the followings is not included in the stages of routine compatibility (cross match) testing?
- A. Immediate spin cross match
 - B. Compatibility test at 37 °C
 - C. Rapid slide test
 - D. Indirect antiglobulin test
22. The shelf life of whole blood collected in CPDA anticoagulant stored at 2-6 °C is approximately
- A. 35 days
 - B. 6 months
 - C. 1 year
 - D. 10 weeks
23. Contraindications of performing FNAC is
- A. Hydatid cyst
 - B. Bleeding diathesis
 - C. Coagulopathies
 - D. All of the above
24. Component of Papanicolaou's stain is
- A. Coles hematoxylin
 - B. Mayers hematoxylin
 - C. Delafields hematoxylin
 - D. Harris hematoxylin
25. OG 6 is a stain for
- A. Keratin
 - B. Fungi
 - C. Mucin
 - D. Fat