

RAJASTHAN PUBLIC SERVICE COMMISSION, AJMER

SYLLABUS FOR SCREENING TEST FOR THE POST OF SENIOR DEMONSTRATOR - PATHOLOGY MEDICAL EDUCATION DEPARTMENT

A. General Pathology :

1. Definition and scope of Pathology.
2. Cell injury
 - Cause and mechanism: Ischemic, Toxic and Apoptosis.
 - Reversible cell injury: Types, morphology, hyaline, fatty change.
 - Irreversible cell injury: Types of necrosis, gangrene.
 - Calcification: Dystrophic and metastatic.
 - Extracellular accumulation : Amyloidosis, classification, pathogenesis, morphology.
3. Disturbances of pigment, Calcium and uric acid metabolism.
4. Circulatory disturbances :
 - Oedema : Pathogenesis and types with special reference to cardiac and renal oedema, ascites, transudate and exudate.
 - Chronic venous congestion: lung, liver, spleen.
 - Thrombosis and embolism: formation, fate and effects.
 - Infarction- types.
 - Shock: Pathogenesis, types, morphological changes.
5. Inflammation and repair.
6. Infectious diseases
 - Mycobacterial diseases: tuberculosis and leprosy.
 - Bacterial diseases : pyogenic, typhoid, diphtheria, gram–ve infections, bacillary dysentery, syphilis.
 - Viral : polio, herpes, rabies, measles, rickettsial, chlamydial infections.
 - Fungal diseases and opportunistic infections.
 - Parasitic diseases: malaria, filaria, amoebiasis, kala azar, cysticercosis, hydatid.
 - AIDS: etiology, modes of transmission, pathogenesis, pathology, complications, diagnostic procedures and handling of infected materials and health education.
7. Immuno Pathology including general concept, classification, basis lesions and immuno-diagnostic methods.
8. Disturbances of growth
 - Atrophy, hypertrophy, hyperplasia, metaplasia dysplasia, malformation, agenesis.
9. Neoplasia : causes, classification, histogenesis, biological behaviour, benign and malignant, carcinoma and sarcoma
 - Malignant neoplasia: grades and stages, local and distant spread.
 - Carcinogenesis: Environmental carcinogen, chemical, viral, occupational, hereditary and basics of molecular basis of cancer.
 - Tumour and host interaction: systemic effects including para neoplastic syndrome, tumour immunology.
 - Laboratory diagnosis: cytology, biopsy, tumour markers.
10. Hereditary and diseases
 - Autosomal and sex-linked disorders with examples.
11. Radiation injuries.

B. Pathology - Systemic Pathology :

1. Disease of Cardio- Vascular system.
2. Disease of respiratory system.
3. Disease of stomach, intestines, liver and gall bladder.
4. Diseases of kidneys, ureter and urinary bladder.
5. Diseases of spleen and lymphnodes.
6. Diseases of nervous system cerebro Vascular diseases, meningitis, encephalitis, neoplasm.
7. Diseases of bones & joints and skin.
8. Diseases of thyroid, pancreas, adrenals and breast.
9. Diseases of Male and Female Reproductive system.

C. Haematopathology :

1. Anaemia: classification and clinical features
 - Nutritional anaemia: Iron deficiency, folic acid/ vit B 12 deficiency anaemia including pernicious anaemia.
 - Haemolytic anaemia: classification and investigation.
 - Hereditary haemolytic anaemia: thalassemia, sickle cell anaemia, hereditary spherocytosis and G 6 PD deficiency.
 - Acquired Hemolytic anemias: malaria, Kala Azar, autoimmune, alloimmune, drug induced, microangiopathic.
2. Haemostatic disorders: platelet deficiency, ITP, drug induced, secondary.
3. Coagulopathies: coagulation factor deficiency, hemophilia, DIC.
4. Leucocytic disorders: Leucocytosis, leucopenia, leukemoid reaction.
5. Acute and chronic leukemia: classification and diagnosis.
6. Multiple myeloma and dysprotenemia.
7. Myelodysplastic syndrome.
8. Myelo proliferative disorders: polycythemia, myelofibrosis.

D. Clinical Pathology :

1. Examination of urine (Physical, Chemical, Microscopic).
2. Examination of cerebrospinal fluid (CSF) Physical, Chemical, Microscopic.
3. Gastric functions tests.
4. Renal function tests.
5. Liver function tests.
6. Enzymes in clinical diagnosis.
7. Diagnostic cutaneous test and other immunopathology test.
8. Pregnancy tests.
9. Fine needle aspiration cytology (FNAC) Cytology and sex chromatin evaluation.
10. Blood Transfusion :- Blood grouping, cross matching, adverse reactions, transfusion transmitted diseases, Blood components and its uses.

Note :- Pattern of Question Paper

1. Objective type paper
2. Maximum Marks :180
3. Number of Questions :180
4. Duration of Paper : Three Hours
5. All questions carry equal marks.
6. There will be Negative marking.
