

**ROYAL CIVIL SERVICE COMMISSION
BHUTAN CIVIL SERVICE EXAMINATION (BCSE) 2021
EXAMINATION CATEGORY: TECHNICAL**

PAPER III: SUBJECT SPECIALISATION PAPER FOR MEDICINE AND SURGERY

Date	: October 31, 2021
Total Marks	: 100
Writing Time	: 150 minutes (2.5 hours)
Reading Time	: 15 Minutes (prior to writing time)

GENERAL INSTRUCTIONS:

1. Write your Registration Number clearly and correctly on the Answer Booklet.
2. The first 15 minutes is to check the number of pages of Question Paper, printing errors, clarify doubts and to read the instructions. You are NOT permitted to write during this time.
3. This paper consists of **TWO SECTIONS**, namely SECTION A & SECTION B:
 - **SECTION A** has two parts: Part I - 30 Multiple Choice Questions
Part II - 4 Short Answer QuestionsAll questions under SECTION A are **COMPULSORY**.
 - **SECTION B** consists of two Case Studies. Choose only **ONE** case study and answer the questions of your choice.
4. All answers should be written on the Answer Booklet provided to you. Candidates are not allowed to write anything on the question paper. If required, ask for additional Answer Booklet.
5. All answers should be written with correct numbering of Section, Part and Question Number in the Answer Booklet provided to you. Note that any answer written without indicating the Section, Part and Question Number will NOT be evaluated and no marks will be awarded.
6. Begin each Section and Part in a fresh page of the Answer Booklet.
7. You are not permitted to tear off any sheet(s) of the Answer Booklet as well as the Question Paper.
8. Use of any other paper including paper for rough work is not permitted.
9. **You must hand over the Answer Booklet to the Invigilator before leaving the examination hall.**
10. This paper has **8 printed pages**, including this instruction page.

GOOD LUCK

SECTION A

PART I: Multiple Choice Questions [30 marks]

Choose the correct answer and write down the letter of your chosen answer in the Answer Booklet against the question number e.g. 31 (d). Each question carries ONE mark. Any double writing, smudgy answers or writing more than one choice shall not be evaluated.

1. Rigor mortis starts from
 - a) Upper eyelids
 - b) Lower eyelids
 - c) Lower limbs
 - d) Fingers

2. The treatment of post thyroidectomy patient who develops tetany is
 - a) Bicarbonate
 - b) IV calcium gluconate
 - c) Calcitonin
 - d) Thyroxine

3. The cause of death in placenta previa is due to
 - a) Infection
 - b) Toxemia
 - c) Hemorrhage
 - d) Thrombophlebitis

4. Covishield (Astrazeneca) Covid-19 vaccine is
 - a) mRNA vaccine.
 - b) simian adeno virus vector vaccine.
 - c) whole virus vaccine.
 - d) attenuated virus vaccine.

5. Initial treatment of anaphylaxis consists of administering
 - a) injection hydrocortisone IV.
 - b) injection hydrocortisone IM.
 - c) injection adrenaline IV.
 - d) injection adrenaline IM.

6. Endotracheal intubation is performed for the following, EXCEPT
 - a) Maintain the airway
 - b) Protect the airway
 - c) Administer drugs
 - d) Provide mechanical ventilation

7. In pericardial tamponade there is failure of filling the
 - a) Left atrium
 - b) Right atrium
 - c) Left ventricle
 - d) Right ventricle

8. The classical triad of hypertensive encephalopathy are
- Severe hypertension, altered level of consciousness and retinopathy
 - Severe hypertension, altered level of consciousness and nephropathy
 - Severe hypertension, altered level of consciousness and neuropathy
 - Severe hypertension, altered level of consciousness and papilloedema.
9. The essential criteria for diagnosis of bronchial asthma is
- FEV1/FVC of less than 70%
 - Tidal volume less than 2 litres
 - FVC is reduced to 80%
 - FEV1/FVC of less than 70% and FVC is reduced to 80%.
10. The causative organism of atypical pneumonia is
- Pseudomonas species
 - Hemophilus influenza
 - Mycoplasma
 - Cryptococci
11. Which of the following features are seen in iron-deficiency anemia?
- There are hypochromic and macrocytic erythrocytes.
 - There is macrocytic erythrocytes and reduced serum ferritin value.
 - There are hypochromic and microcytic erythrocytes.
 - There is hyperchromic and microcytosis.
12. In hypothyroidism there is
- elevated TSH and low free T4.
 - normal TSH and low free T4.
 - elevated TSH and normal free T3.
 - elevated TSH and normal free T4.
13. In hypocalcemia, which one of the following is true?
- Chvostek sign is positive.
 - Trousseau sign positive and negative deep tendon reflexes.
 - There is shortening of QT interval.
 - The signs and symptoms of hypocalcemia is due to total calcium.
14. Parkinson disease presents with
- Resting tremor, rigidity and macrographia.
 - Essential tremor, cogwheel rigidity and micrographia.
 - Resting tremor, cogwheel rigidity and micrographia.
 - Narrow shuffling gait, paucity of facial expression and macrographia.
15. The birth dose of hepatitis B vaccine is given within
- 48 hours of birth
 - 24 hours of birth
 - 7 days of birth
 - 2 weeks of birth

16. The risk factors for upper gastrointestinal bleeding are
- use of NSAIDs, erosive gastritis and H.Pylori.
 - use of NSAIDS , H. Pylori and duodenitis.
 - H.Pylori, erosive gastritis and pyloric stenosis.
 - Zollinger-Ellison syndrome, prior history of GI bleed and pancreatitis.
17. Giardia intestinalis causes disease in the
- large intestine and causes diarrhoea.
 - small intestine and causes diarrhea.
 - rectum and causes bleeding.
 - ascending colon and causes obstruction.
18. In alcohol liver disease, which liver enzyme is specific for diagnosis?
- Gamma glutamyl transferase
 - Alanine Aminotransferase
 - Aspartate aminotransferase
 - Alkaline phosphatase.
19. Complications of blood transfusion are
- circulatory failure and air embolus.
 - transmission of infections and pedal edema.
 - anaphylaxis reactions and angioedema.
 - parasitic transmissions and diarrhea.
20. All of the following regarding hydatidiform mole are true, EXCEPT
- partial or complete mole.
 - passing grape like cysts per vagina.
 - treatment is by dilation and curettage.
 - choriocarcinoma is common complication.
21. The most common carcinoma of lungs is
- Small cell carcinoma.
 - Squamous cell carcinoma.
 - Adenocarcinoma.
 - Bronchoalveolar cell carcinoma.
22. Cobra bites cause death due to
- hemolysis.
 - respiratory muscle paralysis.
 - neurotoxicity.
 - acute renal failure.
23. Prothrombin time measures the deficiency of factors
- VII, X and V
 - VII, X and I
 - VII, IX and II
 - VII, VIII and VI

24. The Human Papilloma Virus (HPV) vaccine is administered to 12-years-old female children as
- 3 doses at 1st month, 2nd month and 6th month.
 - 2 doses at 1st month and 6th month.
 - 3 doses at 1st month, 2nd month and 3rd month.
 - 2 doses at 1st month and 2nd month.
25. Combined Oral pills used for family planning contain
- Levonorgestrel 0.15 mg and oestradiol 0.03mg
 - Levonorgestrel 1.50 mg and oestradiol 0.30mg
 - Levonorgestrel 0.10 mg and oestradiol 0.01mg
 - Levonorgestrel 0.5 mg and oestradiol 0.30mg
26. All of the following are the Complications of postnatal period EXCEPT
- postpartum blues
 - thrombophlebitis
 - secondary hemorrhage
 - haemorrhoids
27. Complications of pregnancy induced hypertension are
- abortion and fetal death.
 - abortion and placenta praevia.
 - abortion and antepartum hemorrhage.
 - eclampsia and anemia.
28. The side effect of Enalapril is
- dry cough
 - hypotension
 - Congestive cardiac failure
 - Bradycardia
29. Glipizide is a
- Sulfonyurea
 - Non-sulfonylurea
 - Insulin sensitizer
 - Alpha-glucosidase inhibitor
30. In woman yield of gonococci is best from
- Urethra
 - Cervix
 - Posterior vaginal fornix
 - Vulva

PART II – Short Answer Questions [20 marks]

This part has 4 Short Answer Questions. Answer ALL the questions.

1. A 40-year-old man presented to the OPD with fever for 5 days, severe headache and bone pain. Patient had been to Gelephu and had stayed for 10 days. On examination, the temperature of 39.5⁰ C and petechiae on the upper part of body was observed.
 - a) What is the most probable diagnosis? (1 mark)
 - b) Name the vectors that transmit the disease? (2 marks)
 - c) Mention the warning signs from progression to severe stage of the disease. (2 marks)

2. A 48-year-old female presented to the OPD with headache and giddiness for a duration of 2 weeks. She is a diabetic on treatment. Her BP was 160/100 mmHg. Systemic examination was normal.
 - a) Write two differential diagnosis of the patient? (2 marks)
 - b) Mention the relevant blood tests for the patient. (1 mark)
 - c) Name one antihypertensive drug each from angiotensin receptor blocker (ARB) and diuretic. (2 marks)

3. A 45-year-old male had been consuming alcohol for the last 20 years. He was presented to the Emergency department with complaints of distension of abdomen and blood in stool. He was disoriented.
 - a) Write three causes of the above condition. (2 marks)
 - b) Name one complication of the above condition. (1 mark)
 - c) Name the three stages of the alcohol liver disease. (2 marks)

4. A 3-year-old child was brought by his mother to the pediatric OPD with fever, headache, irritability and drowsiness for the duration of 5 days. The mother of a child said that the child had loss of appetite and weight for the period of 2 weeks. On examination, the child was irritable.
 - a) What is the most probable diagnosis? (1 mark)
 - b) Name the common features of the 2nd stage of this disease. (2 marks)
 - c) What is the most important diagnostic test and describe the findings. (2 marks)

SECTION B: Case Study [50 marks]

Choose either Case I OR Case II from this section. Each case study carries 50 marks. Mark for each sub-question is indicated in the brackets.

CASE I

A 25-year-old married lady presented to emergency with per vaginal bleeding for a duration of 2 days and pain in the lower abdomen for 1 day. On examination, Her BP was 160/110mmHg, abdomen was soft and mildly tender. On vaginal examination, os was 2cm dilated with active bleeding with clots.

1. Mention three relevant questions you would ask regarding the diagnosis. (3 marks)
2. What are the most probable diagnosis? (2 marks)
3. Mention five types of abortions and define them. (5 marks)
4. Name three signs of ectopic pregnancy. (3 marks)
5. What is MMR and write its formula. (2 marks)
6. Mention two relevant blood test to be done for this patient. (2 marks)
7. Define heterotopic pregnancy. (1 mark)
8. What drug and dose is used for the treatment of Rh negative mothers and when? (3 marks)
9. Define antepartum haemorrhage. (1 mark)
10. Mention three causes of antepartum hemorrhage. (3 marks)
11. Define pre-eclampsia. (2 marks)
12. How will you manage this patient including investigations? (10 marks)
13. Define eclampsia. (1 mark)
14. What is HELLP syndrome? (2 marks)
15. What is the drug used for the treatment of eclampsia, dosage and route, mechanism of action, side effects, and treatment of the side effect. (10 marks)

CASE II

A 40-year-old male visited the OPD of a hospital with productive cough for a duration of 20 days. He had loss of weight and mild fever. There was no improvement of his symptoms with antibiotics. On examination, he was pale, BP 120.72mmHg, crepitations present on the left side chest. He was a smoker for more than 10 years.

1. Write two differential diagnoses for the above patient? (2 marks)

2. What is presumptive TB? (2 marks)
3. Define bacteriologically confirmed TB case. (3 marks)
4. Mention five types of extra pulmonary TB and describe the most common one. (5 marks)
5. Classify TB according to history of previous TB treatment. (5 marks)
6. Mention the treatment outcomes and describe one. (8 marks)
7. Write three characteristics of CSF TB meningitis. (3 marks)
8. Mention three advantages of fixed dose combinations TB drugs. (3 marks)
9. Describe the management of drug susceptible TB, name the drugs, dosage and side effects of drugs in Bhutan. (10 marks)
10. Define Multi drug resistant TB? (2 marks)
11. In children, what are the four cardinal symptoms of TB? Describe them. (4 marks)
12. What are the features of TB lymphadenitis in children? (3 marks)

TASHI DELEK