

B.Sc. Allied Health Sciences Second Year (Semester-IV)

October 2014 Examination

B.Sc. Operation Theater Technology (OTT)

Time : 3 Hrs.

Paper – I

[Max. Marks : 100]

Applied Pathology & Microbiology

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

(Use separate answer booklet for Section A & B)

Section – A

Applied Pathology (50 Marks)

Q.P Code : AHS-114

LONG ESSAY

2 X 10 = 20 Marks

1. Define Atherosclerosis. Discuss the risk factors, pathogenesis and morphology of atherosclerosis.
2. Define acute renal failure (ARF) and list the causes, pathogenesis, and effects of acute renal failure.

SHORT ESSAY (Answer any three)

3 X 5 = 15 Marks

3. Pathogenesis of ischemic heart disease (IHD)
4. Complications of cardiac valve prosthesis.
5. Cardiomyopathy- definition and types.
6. End stage renal disease – discuss causes and effects.
7. Obstructive uropathy – causes and clinical manifestation.

SHORT ANSWERS (Answer any five)

5 X 3 = 15 Marks

8. Name the clinical syndromes of IHD.
9. Types of hypertension and give two causes for each type.
10. Give three causes each for left and right heart failure.
11. Pericardial effusion –complications.
12. Name three complications of aneurysms.
13. Three Enzymes increased in myocardial infarction.
14. Diagnostic criteria for infective endocarditis.

Section – B

Applied Microbiology (50 Marks)

Q.P Code : AHS-115

(Use separate answer booklet for Section-B)

LONG ESSAY

2 X 10 = 20 Marks

1. Enumerate the diseases communicable to health care workers in hospital setup and what are the preventive measures.
2. Classify disinfection. Describe in detail OT sterilization.

SHORT ESSAY (Answer any three)

3 X 5 = 15 Marks

3. Blood spill management.
4. Name the diseases spread by oro-Faecalroute.
5. Direct surface agar plating technique.
6. What are the measures taken to control the respiratory tract infection?
7. Name the infections communicable to health care workers by blood.

SHORT ANSWERS (Answer any five)

5 X 3 = 15 Marks

8. Mantoux test.
9. Rinse technique.
10. Widal test.
11. Name of specimen collection methods in outpatient unit.
12. Herpes simplex virus.
13. Ascariasis.
14. Window period.

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Paper – II

[Max. Marks : 100]

Introduction to OT Technology

Q.P Code : AHS-116

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

1. Classify blood groups. Enumerate the complications of blood transfusion?
2. Classify mapleson's breathing system? Describe Bain's circuit in detail.

SHORT ESSAY (Answer any Ten)

10X 5 = 50 Marks

3. Effect of prone position on circulation and respiratory system.
4. Describe capnogram. What are the factors that may change end-tidal CO_2 during anaesthesia?
5. Enumerate factors responsible for hypothermia during anaesthesia and measures to prevent.
6. How do you disinfect instruments, linen and the OT following a case of hepatitis 'B' infection?
7. What does informed consent means?
8. Describe monitored anaesthesia care.
9. Enumerate the operative procedure, of abdominal hysterectomy.
10. Compare and contrast monopolar versus bipolar cautery.
11. Enumerate the risks of occupational infection, post exposure treatment and prophylactic antiviral therapy of HIV.
12. Define sepsis. Describe the medical management of a case with multi organ dysfunction syndrome (MODS) coming for emergency laparotomy.
13. How do you prepare instrument trolley for ureterorenoscopy(URS)?
14. Name commonly used carbon dioxide absorbents. Write their composition and chemistry.

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

15. How are sharp instruments disposed in the operation theatre?
16. Name the organisms resistant to disinfection and sterilization?
17. Write short note on ambu resuscitator.
18. Categorically name the complications of ethylene oxide sterilization.
19. Enumerate the advantages of day care surgery.
20. How do you prevent micro shock in the operation theatre.
21. Write short note on record keeping.
22. Write a short note on audit.
23. Explain piped distribution system with a diagram.
24. What are the advantages of circle system?
25. Classify vaporizers.
26. When is it ethically acceptable to stop treatment?

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Time : 2.30 Hrs.

Paper - III

[Max. Marks : 80]

Pharmacology

Q.P Code : AHS-117

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

1. Enumerate aminoglycosides. Write the mechanism of action, therapeutic uses and adverse effects of gentamicin.
2. Classify benzodiazepines. Write the therapeutic uses and adverse effects of diazepam.

SHORT ESSAY (Answer any Six)

6X 5 = 30 Marks

3. Define antiseptics. Write the characteristic features of an ideal antiseptic.
4. Mechanism of action and adverse effects of sulfonylureas.
5. Mechanism of action and therapeutic uses of cefotaxime.
6. Therapeutic uses and adverse effects of metoclopramide.
7. Therapeutic uses and adverse effects of cetirizine.
8. Advantages and disadvantages of crystalloids.
9. Explain mechanism of action, uses and adverse effects of salbutamol.
10. Write the therapeutic uses and adverse effects of prednisolone.

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

11. Define chemoprophylaxis. Give two examples.
12. Rationale of using clavulanic acid with amoxicillin.
13. Mention three drugs used in anaerobic infections.
14. Mention three opioid analgesics.
15. Explain mechanism of action and two uses of ketamine.
16. Mention three insulin preparations.
17. Mention three disinfectants.
18. List three advantages of using combination of antimicrobial agents.
19. List three uses of penicillin-G.
20. Enumerate three drugs used in peptic ulcer.
21. Mention three uses of aspirin.
22. Mention three differences between nitrous oxide and halothane.

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Time : 2.30 Hrs.

Paper - IV

[Max. Marks : 80]

Medicine Relevant to OT Technology

Q.P Code : AHS-118

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

1. Classify shock. Enumerate the symptoms, signs and management of septic shock.
2. Discuss the role of sodium in the body and management to hypo and hypernatremia.

SHORT ESSAY (Answer any Six)

6X 5 = 30 Marks

3. Enumerate perioperative complications in chronic renal failure patients.
4. Enumerate liver function tests.
5. What are the complications of hepatic cirrhosis?
6. Write a brief note on dialysis.
7. What are the advantages and disadvantages of colloids and crystalloids?
8. Describe briefly the causes for renal failure.
9. Enumerate the causes for hyperkalaemia?
10. Describe total body water distribution.

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

11. What are the perioperative complications in patients with ascites?
12. What size airway, LMA (Laryngeal mask airway), endotracheal tube and laryngoscope blade you keep ready for 1 month old child weighing 4.5 kg coming for hernia repair?
13. Describe the pathophysiology of ischemic stroke.
14. Enumerate the etiopathogenesis of cerebrovascular accident.
15. Composition of extracellular fluid.
16. Drugs to be kept ready in neonatal resuscitation trolley.
17. Enumerate the causes for cirrhosis?
18. Normal range of blood urea and serum creatinine. What are the causes for raise in blood urea and creatinine?
19. Management of hepatic encephalopathy?
20. Enumerate the causes and treatment for hypovolaemia.
21. Enumerate the causes for hyperbilirubinemia.
22. Criteria to label chronic renal failure.