

02-01-2023

II-MBBS
Second M.B.B.S. (Main) Examination (New Scheme)

December - 2022

MICROBIOLOGY

Paper-Second

Time: Three Hours

Maximum Marks: 100

 Attempt all questions in both sections
 (Use separate answer book for each section)

Section-A

1. Fill in the blanks:

6 x 1 = 06

- a) Common skin warts are caused by _____.
- b) _____ is smallest DNA virus causing fifth disease.
- c) Capsulated budding yeast cells in negative staining is diagnostic of _____ fungi.
- d) Germ tube test is diagnostic for _____.
- e) Mumps infects primarily _____ glands in children.
- f) Subacute sclerosing panencephalitis (SSPE) is a complication of _____ virus infection.

2. Answer the followings (Multiple Choice Questions):

4 x 1 = 04

- i) Satellitism is seen in cultures of

a) Hemophilus	b) Klebsiella
c) Streptococcus	d) Proteus
- ii) Inclusion body is seen in

a) Rickettsiae	b) Chlamydia	c) Mycoplasma	d) H. pylori
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- iii) Dimorphic fungi is

a) Rhizopus	b) Sporothrix
c) Trichophyton	d) Microsporum
- iv) Highly infectious stage in whooping cough

a) Catarrhal stage	b) Paroxysmal stage
c) Convalescent stage	d) All of the above

 3. A 36 year old British writer touring India developed acute loose motions on the 5th day of his visit. Stool culture on MacConkey agar shows lactose fermenting colonies

- a) What is the clinical diagnosis & causative organism? 02
- b) Write pathogenesis of organism. 02
- c) Discuss the lab diagnosis in brief. 05
- d) Write treatment of the condition. 06

4. Write short notes on (Any five):

02

5 x 2 = 10

On examination he was thin but well appearing male. His vital signs were normal. Examination of his throat showed thick white plaques on the posterior pharyngeal and soft palate, multiple oval-shaped purple or brown macules were present on the skin of his chest. They were firm on palpation and vary in size from 0.5 cm to 4.0 cm in length. Several of them appeared to be growing together into larger, confluent plaques. A punch biopsy of one of the lesions was performed. The pathology report showed the diagnosis of Kaposi sarcoma.

Answer the following:

- a) Besides Kaposi sarcoma with which other virus is the patient likely to be infected?
 - b) Which specific cell types are most commonly infected with virus?
 - c) Which cell surface receptor is the binding site of this virus?
4. Write short notes on (Any five): 5 x 2 = 10
- a) Bacterial growth curve.
 - b) Bacterial cell wall.
 - c) Hapten.
 - d) IgM antibody.
 - e) Principle of Elisa.
 - f) PCR.
5. Write in briefly (Any three): 3 x 5 = 15
- a) Opportunistic infections in AIDS.
 - b) Zoonosis.
 - c) Characteristics of antigen.
 - d) Delayed type of hypersensitivity reaction.

Section-B

6. Describe various techniques used for the treatment and disposal of biomedical waste. 20
7. Write short notes on (Any five): 5 x 2 = 10
- a) Alternative pathway of complement.
 - b) Blood culture and its significance.
 - c) Primary immune response.
 - d) Conjugation.
 - e) Transformation.
 - f) Antibiotic sensitivity test.
8. Explain briefly (Any four): 4 x 5 = 20
- a) Active immunization.
 - b) Culture media.
 - c) Drug resistance.
 - d) Major histocompatibility complex.
 - e) Antimicrobial stewardship.