Marks scored:

KATHMANDU UNIVERSITY
End Semester Examination
March/April, 2017

Level : B. Pharm.
Year : II

Course : PHAR 201
Semester : I

Exam Roll No. :

Time: 30 mins.

F. M. : 20

Registration No.:

Date : APR 10 2017

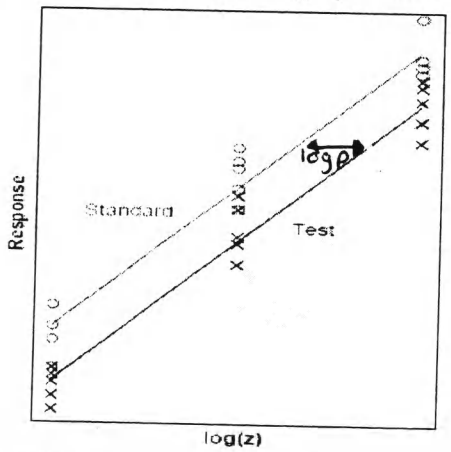
SECTION "A"
[20 Q. × 1= 20 marks]

Tick [√] the correct answer.

1. Curved rod shaped bacteria are known as
[a] Cocci [b] Vibrio forms [c] Bacilli [d] Plemorphic forms

2. The full form of GMP is_____
[a] Good Mental Practice [b] Great Master Practice
[c] Good Manufacturing Practice [d] Good Manufacturing Product

3. In the experiment, the graph is observed as below. The graph shows that the drug is:



[a] More potent than standard [b] Less potent than standard
[c] Equally potent [d] Equally non-potent

4. Koplic spots observed in the mucous membrane is characteristic feature of the disease
[a] Cholera [b] Measles [c] Malaria [d] Influenza

5. An example for common air borne epidemic disease is:
[a] Influenza [b] Typhoid [c] Diphtheria [d] Malaria

6. Relative humidity in clean room is monitored by:
[a] Thermometer [b] Anemometer [c] Sling Psychrometer [d]Manometer

7. Mustard oil cannot be used for oil-immersion lens because_____
[a] It has more refractive index more than glass
[b] it has less refractive index less than glass
[c] Its refractive index is equal to glass
[d] Its refractive index is equal to water

8. The smallest size of particle which has been considered for clean room is_____
[a] 0.2 µm [b] 0.3 µm [c] 0.4 µm [d] 0.5 µm

9. Microorganism produced by genetic engineering produce important medicinal substance like _____ that promotes glucose metabolism.
[a] Insulin [b] Enzymes [c] Pancreatic alpha-amylase [d] Protein

10. The organelles of bacteria that helps in genetic transfer is _____
[a] Pili [b] Fimbrae [c] Cell membrane [d] Flagella

11. Which one of the following option is present in gram positive bacteria only?
[a] Peptidoglycan layer [b] Carbohydrates
[c] Teichoic acids [d] Cell membrane

12. Spirochete is the term used to denote bacterial shape which means_____shaped
[a] rod [b] Spiral [c] Helical [d] Curved

13. Incorporation of 0.8 % agar with appropriate quantity of water makes it a_____agar?
[a] liquid [b] Solid [c] Semisolid [d] gas

14. Fluid agar solutions set at approximately_____, but do not reliquify on heating until the temperature is in excess of _____
[a] 40 °C, 90 °C [b] 38 °C, 88 °C
[c] 39 °C, 89 °C [d] 37 °C , 87 °C

15. HIV is belonging to
[a] Retro Viridae [b] Rhabdo Viridae
[c] Toga Viridae [d] Paramyxo Viridae

16. Pyrogens can't be eliminated by_____
[a] Ultrafiltration [b] Reverse osmosis
[c] Heating at 325 °C for 30 Seconds [d] Heating at 650 °C for 1 minute

17. _____is the pore size of filtration that removes microorganism to sterilize pharmaceutical agents.
[a] 1 µm [b] 0.45 µm [c] 0.46 µm [d] 2 µm

18. The number of degree of temperature change necessary to change the D-value by a factor of 10 is called_____
[a] W- Value [b] X- Value [c] Y- Value [d] Z- Value

19. During the bacterial growth indicates all except _____
[a] The cell stop its division/take rest, the number remains constant
[b] There is complete depletion of nutritive source for cell division
[c] Dead cells outnumber the dividing cells
[d] A sharp rise in the curve

20. Grey area is also called_____
[a] moderately clean area [b] semi-clean area
[c] completely clean area [d] dirty area

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SECTION "B"
[5Q. × 3 = 15 marks]

Indicate by checking (√) of each question you have answered in the cover page of main answer book. Answer *ANY FIVE* of the following questions:

1. Define:
   a. Pharmaceutical microbiology
   b. Positive and Negative Control
   c. Grey area

2. List down 6 diseases that are vaccine preventable.

3. Define culture media and list down the media/s suitable for bacteria and fungi.

4. Define aseptic techniques and list down the steps where these techniques have to be followed.

5. List down the sources of contamination in Pharmaceutical Industry due to particle.

6. What is IMVIC test? What do Methyl Red Test (MR-Test) and Voges-Proskauer Test (VP-Test) indicate in the identification of microorganism?

7. What are the official assay methods? Describe in short.

SECTION "C"
[5Q. × 5 = 25 marks]

Answer *ANY FIVE* of the following questions.

8. List down the parts of a compound microscope and mention the use of each component.

9. Distinguish between bacteria, virus and fungi. What benefits they can provide in the field of Pharmacy?

10. What are different sterilization methods? Mention the mechanism of dry and moist heat sterilization. Explain about radiation sterilization.

11. What are the sources of microbial contamination? What are the strategies to avoid it? Explain.

12. Explain about two communicable diseases.

13. Discuss on the classification of clean room areas in Pharmaceutical Industry as per the following headings; Black, Grey and White areas. Also list down the limit of particle count for Class 1 and Class 2 clean room.

14. Discuss on microbial monitoring processes.

SECTION "D"

[2Q.× 7.5 = 15 marks]

Answer *ANY TWO* of the following questions:

15. Classify pyrogens. What are its physiological effects? Explain the detail procedures of pyrogen testing.

16. Name different methods of sterilization. Mention the organisms that need high level disinfection, intermediate level disinfection and low level disinfection. Discuss about sterilization by chemical.

17. On what principle, microbiological assay of antibiotics are carried out? Why are accuracy and precision checked in microbiological assay? Explain the methods to carry out microbiological assay.