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Total Number of Pages 16

B.V.Sc. & A.H. (Second Professional) Examination - 2022

Veterinary Microbiology Paper - I

(MSVE 2016)

To be filled by the candidate:

Candidate's Roll Number:

In figure

In words

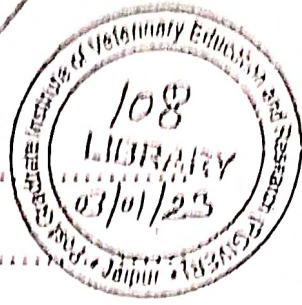
Candidate's Enrolment Number:

Day and date of examination:

Please see for general instructions overleaf.

Signatures of invigilators verifying the details filled by the candidate

Signature of invigilator 1: 2:



Candidate should not write anything below this line

Marks to be filled by the examiner

Section A	
Q. No.	Marks
1.	
2.	
3.	
4.	
5.	
Total	

Total Marks obtained:

In figures: In words:

Signature of examiner:

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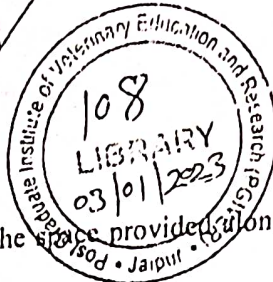
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B.V.Sc. & A.H. (Second Professional) Examination – 2022 Veterinary Microbiology Paper - I

Time: Three Hours

Maximum Marks: 100
Weightage: 20

- Unit-1 (General & Systematic Veterinary Bacteriology)
- Unit-2 (Veterinary Mycology)
- Unit-3 (Microbial Biotechnology)



Instructions:

- 1) Attempt all questions
- 2) Answer of all questions is to be written in the space provided along with the question in question-booklet.
- 3) Overwriting is not allowed in the objective type question. (20x0.5 = 10)

Q.1 Fill in the blanks.

- 1.1 Cigar shaped bodies are produced by fungal agent.
- 1.2 Tuberculate chlamydospores are characteristic feature of
- 1.3 Mycoplasma, which do not require Sterol for their growth belonged to
- 1.4 Facial eczema in sheep is caused by mycotoxin.
..... as cofactor for DNA polymerase enzyme in PCR
- 1.5 BLAST stands for Basic Local search Tool.
- 1.6 Superficial fungal infections caused by dermatophytes are referred as
- 1.7 Naglers reaction with *Clostridium perfringens* on egg yolk agar is due to
- 1.8 In weil felix reaction antigen from bacteria are used as antigen.
- 1.9 Elementary bodies of Chlamydiae differentiate into bodies.
- 1.10 present in bovine placenta which stimulates the growth of *Brucella* *erythritol*
- 1.11 Swarming type of growth on agar plate is characteristic of
- 1.12 Capsule of virulent strains of *Bacillus anthracis* is made up of *poly-D-glutamic acid*
- 1.13 Strangle in horse is caused by *Streptococci equi*
- 1.14 Tick pyemia in lamb is caused by *S. aureus* (*Inodes ricinus*)
- 1.15 Bipolar staining is characteristic of *Pasteurella, Yersinia, Listeria*

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- 1.16 *Thermophilus* spp. requires factor for growth.
- 1.17 Carmel fuscum is used as primary stain for Ziehl Neelsen staining.
- 1.18 S. agalactiae is an organism positive for CAMP test
- 1.19 Member of enterobacteriace family giving + + - - IMVIC test is E. coli
- 1.20 Edward's Medium is selective media for Streptococci.

Q.2 Choose the most suitable answer and write the number of the correct answer 1 or 2 or 3 or 4 in the space given against each sub question:

(20x0.5 = 10)

- 2.1. Asexual rectangular spores produced by fragmentation of hyphae of ()
fungi are
1. Blastospores
 2. Arthrospores
 3. Sporangiospore
4. Conidiospore
- 2.2 Which of the following used in DNA finger printing ()
 1. Southern blotting
2. Western blotting
3. Northern blotting
4. Dot blotting
- 2.3 Pseudohyphae are seen in ()
1. Aspergillus
 2. Candida
3. Trichophyton
4. Epidermophyton
- 2.4. Isoschizomers recognize ()
1. same recognition sequence but different recognition site
2. same recognition site and recognition sequence
3. same recognition site and different recognition sequence
4. different recognition site and different recognition sequence
- 2.5. Pathogenic Staphylococci are usually ()
 1. Coagulase positive
2. Produce haemolysis
3. Ferment mannitol
4. all of the above
- 2.6. Lancefield classification of Streptococci is based on ()
1. Hemolytic property
 2. C substance
3. antigen antibody reaction
4. none of the above

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- 2.7. Chronic respiratory disease is caused by ()
1. *Mycoplasma synoviae*
2. *Mycoplasma gallisapticum*
3. *Mycoplasma gallinarum*
4. all of the above
- 2.8. Enzootic abortions in ewes are caused by ()
1. *Leptospira pomona*
2. *Brucella abortus*
3. *Clamydophila abortus*
4. *Campylobacter fetus*
- 2.9. Glycerol favors the growth of ()
1. *M. tuberculosis*
2. *M. paratuberculosis*
3. *M. phlei*
4. *M. laprae*
- 2.10. Mouse neutralization test is used for the diagnosis of ()
1. Black Quarter
2. Enterotoxemia
3. Hemorrhagic septicemia
4. Anthrax
- 2.11. Long chain fatty acids for growth of *Leptospira* can be supplied by ()
1. Serum
2. Beef extract
3. Agar
4. Yeast extract
- 2.12. Enrichment medium used for isolation of *Salmonella* is ()
1. EMB agar ✗
2. Tetrathionate broth
3. Thiol Medium
4. PPLO broth
- 2.13. Zone of opalescence in Egg yolk agar is due to production of ()
1. Lecithinase
2. Coagulase
3. Catalase
4. Neuraminidase
- 2.14. Haemorrhagic septicemia in cattle and buffaloes is caused by ()
Pasteurella multocida
1. capsular type A
2. capsular type D
3. capsular type B
4. capsular type F
- 2.15. *Streptococcus pyogenes* belongs to Lancefield group ()
1. Group A
2. Group B
3. Group C
4. Group D - *Enterococcus*



2.16. The colony of mycoplasma looks like

1. Mucoid colony
2. Dew drop like
3. Fried egg like
4. Medusa head like

2.17. In abortus bang ring test (ABRT) antigen is usually stained by

1. Methylene blue
2. Crystal violet
3. Tetrazolium
4. Bromophenol blue

2.18. Morse code appearance can be seen in

1. Haemophilus
2. Pasteurella
3. Actinobacillus
4. Bordetella

2.19. Dipicolinic acid is present in

1. Bacterial cell wall
2. Flagella
3. Spore
4. Pili

2.20. Yeast cell with thick polysaccharide capsule

1. Cryptococcus neoformans
2. Blastomyces dermatitidis
3. Candida albicans
4. Saccharomyces cerevisiae

Histoplasma capsulatum

Q.3 Attempt any ten out of the following twelve questions. Answer of each question should be in 2 to 3 lines. (10x2.0=20)

3.1 Lamsiekte

3.2 Diennes phenomenon

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3.3 Cold enrichment

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.....
.....

3.4 Tuberculin test

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3.5 Virulence

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3.6 Thermophile

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3.7 Protoplast

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3.8 Binary fission

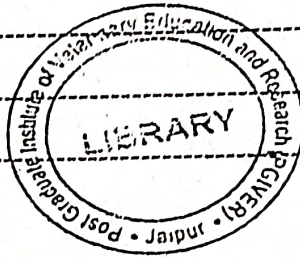
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3.3 Cold enrichment

3.4 Tuberculin test

3.5 Virulence



3.6 Thermophile

3.7 Protoplast

3.8 Binary fission

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3.9 Generation time

3.10 Thermal death time

3.11 Symbiosis

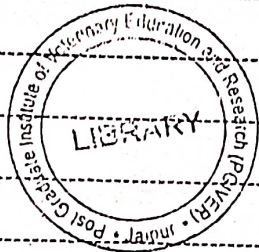
3.12 Pathogenesis

Q.4 Attempt any six out of the following eight questions. Answer of each question should be in 8 to 10 lines. (6 x 6.0 = 36)

4.1 Bacterial conjugation

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4.2 Chronic Respiratory Disease



4.3 Emerging animal disease

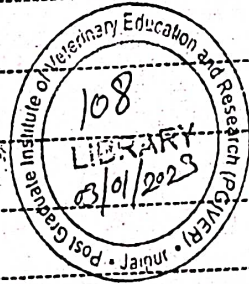
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4.4 Cutaneous mycoses

4.5 Southern Blotting

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4.6 Enterotoxaemia in sheep



4.7 Wooden Tongue

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4.8 Plasmid

Q.5 Answer the following question in 1/2 pages (attempt any two).

(2x12.0 = 24)

- 5.1 Describe etiology and pathogenesis of Contagious Bovine Pleuropneumonia (CBPP).
Write about its diagnosis, prevention and control. (6 marks)
- 5.2 Describe the cultural characteristic of Brucella species. (6 marks)
Write its pathogenesis, diagnosis and control. (6 marks)
- 5.3 Describe the virulence factors of Staphylococcus species. (6 marks)
Write in detail about the disease caused by Staphylococcus. (6 marks)