

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: BPHARM
BRANCH: PHARMACY**

**SEMESTER : VIII
SESSION : SP/18**

**SUBJECT: PS8411 FERMENTATION TECHNOLOGY AND BIOLOGICAL PRODUCTS
TIME: 3.Hours**

FULL MARKS: 60

INSTRUCTIONS:

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
 2. Candidates may attempt any 5 questions maximum of 60 marks.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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| Q.1(a) What do you mean by immunity? | [2] |
| Q.1(b) Discuss the innate immunity in detail | [4] |
| Q.1(c) Discuss the preparation, preservation and standard of pertussis vaccine according to IP | [6] |
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| Q.2(a) What do you mean by diagnostic preparation? | [2] |
| Q.2(b) Discuss the concept of schick test in detail | [4] |
| Q.2(c) Discuss the two official diagnostic preparation used against diphtheria. | [6] |
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| Q.3(a) What do you mean by viral vaccine? | [2] |
| Q.3(b) Discuss the reason for shorter duration of viral immunity in special cases. | [4] |
| Q.3(c) Discuss the preparation of small pox vaccine from live animal. | [6] |
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| Q.4(a) Which vaccine is generally used against typhoid infection? | [2] |
| Q.4(b) Why paratyphoid component is not very important in preparation of vaccine against typhoid | [4] |
| Q.4(c) Discuss the preparation of typhoid vaccine in detail | [6] |
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| Q.5(a) Why do you mean by toxoid? | [2] |
| Q.5(b) Discuss the preparation of formol toxoid used against diphtheria in detail. | [4] |
| Q.5(c) Discuss the Toxin antitoxin floccule (TAF) & alum precipitated toxoid used against diphtheria in detail | [6] |
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| Q.6(a) What do you mean by antitoxin | [2] |
| Q.6(b) Why horses are preferred for the preparation of antitoxin? | [4] |
| Q.6(c) Discuss the method of purification of serum during preparation of antitoxin. | [6] |
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| Q.7(a) What are the selection criteria for donor for whole human blood? | [2] |
| Q.7(b) Discuss the advantage and disadvantage of dried human plasma. | [4] |
| Q.7(c) Discuss the problems generally encountered in the preparation of dried human plasma. | [6] |

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