

B.Sc.(N) [Post Basic (1st Year)]

BF/2008/12

Biochemistry & Biophysics

[Old Scheme]

M.M. : 70

Time : 3 Hours.

Note: Attempt Three questions from each Section. Question No. 1 of each Section is Compulsory.

USE SEPARATE ANSWER SHEETS FOR EACH SECTION.

SECTION-A (Biochemistry)

1. **Attempt any FIVE of the following:** [5x3=15]
 - a. What is the clinical relevance of the Henderson-Hasselbalch equation.
 - b. How bile helps in the digestion of fats?
 - c. Diabetic profile tests.
 - d. Describe different states of matter.
 - e. What precautions should be taken while collecting blood samples for Sugar and Lipid profile.
 - f. Absorption of glucose.
 - g. *Write the normal values for the following*
Alkaline phosphatase; Albumin, Creatinine, Amylase; Inorganic phosphorus & cholesterol.
2. Discuss in detail the functions of various Plasma proteins. [10]
3. What is Glycolysis? List the number of ATP molecules synthesized from one molecule of glucose during aerobic and anaerobic glycolysis. [10]
4. **Attempt any TWO of the following:** [2x5=10]
 - a. Mechanism of enzyme action.
 - b. Chemical composition of CSF and clinical significance of CSF protein determination.
 - c.
 - i) Anticoagulants.
 - ii) Glycosylated hemoglobin.

P.T.O.

SECTION-B
(Biophysics)

1. **Explain briefly any FIVE of the following:** [5x3=15]
 - a. Use of rubber-soled shoes in Operation Theatre(OT) is not recommended.
 - b. Fast moving wheelchair on which a patient is sitting should not be stopped suddenly.
 - c. Use of Stethoscope for listening to sound from human body.
 - d. Traction is applied to both ends of spine to correct lateral curvature of spine.
 - e. Suction is used to drain body fluids.
 - f. Use of hot applications in abdominal distention.
 - g. Artificial respiration is used to restore breathing in drowned person.
 - h. Hot water is more effective as cleaning agent than cold water.
2.
 - a. How does the human eye focus light? Will the same focusing power be required for nearby objects and those that are far away. [6]
 - b. How does this focusing power change as you get older? [4]
3.
 - a. What are the dangers of electricity and how can they be minimized? [6]
 - b. Why is the earth wire used in many electrical power systems. [4]
4. **Write short notes on any TWO:** [2x5=10]
 - a. Describe how ultrasound is used to image a foetus in the womb.
 - b. Two clinical situations where suction is used.
 - c. Use of radioisotopes in cancer therapy.
 - d. Heart as a pump.
 - e. Force of friction may result in abrasions.

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Microbiology

[Old Scheme]

M.M. : 70

Time : 3 Hours.

Note: Attempt FIVE questions only. Q.No.1 is compulsory.

1A. Give one word answer of the following:

[8x1=8]

1. Name a vaccine to prevent Polio.
2. Name a virus that causes diarrhoea in infants.
3. Name causative agent of Anthrax.
4. Name the causative agent of Gonorrhoea.
5. Name one bacterium showing darting motility.
6. Write scientific name for 'Hook worm'.
7. Name one sexually transmitted parasite.
8. Name the vector for Kala-azar.

1B. Pick up the most appropriate answer:

[3x1=3]

1. *Blood agar:*
 - a. is an enrichment medium.
 - b. is an enriched medium.
 - c. is a basal medium.
 - d. is a selective medium
2. *Principal vector for Kala-azar:*
 - a. tse tse fly.
 - b. Aedes mosquito.
 - c. Sand fly.
 - d. Culex mosquito.
3. *Normal serum half life of IgG is:*
 - a. 23 days.
 - b. 6 days.
 - c. 5 days.
 - d. 1 day.

1C. Fill up the blanks.

[3x1=3]

- a. MMR vaccine is for _____, _____ and _____.
- b. Commonest fungal infection in HIV patients _____.
- c. A fungus present in Pigeon bird droppings and causes meningitis is _____.

2. Write short notes on any FOUR of the following:

[4x3¹/₂=14]

- | | |
|---------------------|--------------------------|
| 1. T. cells. | 2. Widal test. |
| 3. ELISA. | 4. Polio vaccines. |
| 5. Rabies vaccines. | 6. Hepatitis B vaccines. |

3. Define Biomedical waste? What are the different types or categories of biomedical wastes and their methods of disposal? Write about incineration in detail.

[2+4+4+4]

P.T.O.

4. Classify different antibiotics. Write about their mechanisms of action. Describe the different ways in which bacteria develops resistance to the antibiotics. [4+5+5]
5. What are Dimorphic fungi? Name the important dimorphic fungi. Write about any one of them in detail mentioning about the agent, the disease and the laboratory diagnosis. [3+3+8]
6. Classify different Helminthic infections. Enumerate some common helminthic infections. Write in detail about Tape worm infection and their lab diagnosis. [3+3+8]
7. **Write briefly on:** [7+7]
a. Lab diagnosis of PUO.
b. Lab diagnosis of Diphtheria.
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Community Health Nursing

M.M. : 70

Time : 3 Hours.

Note: Answer **FOUR** questions in all and **Q.No. 5** is **COMPULSORY**.

1.
 - a. Discuss briefly the importance of family centred patient care. [4]
 - b. List the steps of family health nursing process that you adopt in reducing family health risk. [6]
 - c. Describe any one step in detail with the help of examples. [5]
 2.
 - a. Explain common nutritional disorders found in our country. [6]
 - b. Discuss measures you would take to prevent and control the nutritional disorders among children. [9]
 3.
 - a. What is meant by 'Couple protection Rate'. [2]
 - b. List the scope of family welfare services. [5]
 - c. What methods you would suggest to increase birth interval among rural mothers. [8]
 4.
 - a. Explain concept of Health education. [3]
 - b. Describe principles of Health education. [6]
 - c. Explain the different methods you will use to impart health education to school children. [6]
 5. **Write briefly on any FIVE of the following:** [5×5=25]
 - a. Legal aspects of community health nursing.
 - b. Diagnosis of family health needs.
 - c. ICDS.
 - d. Infant mortality rate.
 - e. Community development programme.
 - f. Principles of home visit.
 - g. Epidemiological models.
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Nursing Education

M.M. : 70

Time : 3 Hours.

Note: Attempt all questions.

1. a. Define 'Philosophy'. [2]
 b. Write the factors influencing philosophy of nursing education. [10]
 2. a. Define 'Learning'. [2]
 b. Describe the different characteristics of Learning. [10]
 3. a. Define 'Teaching'. [2]
 b. State the different maxims of teaching helping in teaching process. [10]
 4. a. Define 'Curriculum'. [2]
 b. Explain about selection of Learning experiences for Curriculum development. [11]
 5. **Write short notes on any THREE of the followings:** [3x7=21]
 - a. Computer assisted learning.
 - b. Evaluation tool.
 - c. Communication process.
 - d. Inservice education.
 - e. Counselling process.
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Sociology

M.M. : 70

Time : 3 Hours.

Note: Attempt all questions

1. Describe the influence of Culture on a) Individual b) the group.
[7¹/₂+7¹/₂]
 2. a. Discuss how the urbanization is decreasing the village population.
[7¹/₂]
b. Discuss the major urban problems.
[7¹/₂]
 3. a. What do you understand by the term 'Social control'? Explain
[5]
b. What do you understand by 'formal and informal' means of Control?
Explain with examples.
[10]
 4. a. What are the features of Village community.
[7¹/₂]
b. How is the village community different than the Urban community.
[7¹/₂]
 5. **Write short notes on any TWO of the following:** [2x5=10]
 - a. Describe the functions of Class.
 - b. Marriage in India.
 - c. Importance and application of Sociology in nursing.
 - d. 'Poverty is the mother of Crime'.
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Introduction to Nursing Research & Statistics

M.M. : 70

Time : 3 Hours.

Note: Attempt all questions.

1. Explain characteristics of survey research method with examples. [10]
 2. How would you select a problem for research in nursing. [10]
 3. Describe the methods of graphical presentation of data. Give examples of a pie chart. [10]
 4. Explain the importance of research in nursing. [10]
 5. **Write short notes on any FIVE of the following:** [5x6=30]
 - a. Hypotheses.
 - b. Review of literature.
 - c. Observation method of data collection.
 - d. Reliability of a research tool.
 - e. Measures of variability.
 - f. Formulating conclusions of research.
 - g. Population and sampling.
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Nursing Administration

M.M. : 70

Time : 3 Hours.

Note: Attempt all questions.

1. a. Describe the principles of Organization. [7]
 b. Draw organization chart of your institution. [8]

 2. a. Explain the concept of material management in nursing. [7]
 b. Describe the principles of management that you will keep in mind while handling equipment and supply in the ward. [8]

 3. a. What are the purposes of Performance appraisal. [7]
 b. Discuss various methods that are used to evaluate the staff nurses. [8]

 4. **Write short notes on any FIVE:** [5x5=25]
 - a. Importance of leadership in nursing.
 - b. Factors affecting quality patient care.
 - c. Standard safety measures.
 - d. Functions of hospital.
 - e. Job description.
 - f. Budgeting.
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Mental Health Nursing

M.M. : 70

Time : 3 Hours.

Note: Attempt all questions.

1. **Define the following:** [5x1=5]
 - a. Hallucination.
 - b. Delusion.
 - c. Tangential thinking.
 - d. Depersonalization.
 - e. Dijaav.
 2.
 - a. Write the principles of Psychiatric nursing. [6]
 - b. Explain misconceptions of mental illness in the society. [10]
 3. Differentiate the Freud and Erickson's theory on Personality development. [15]
 4.
 - a. Define Anxiety. [2]
 - b. Write the psychodynamics of anxiety neurosis. [4]
 - c. Discuss the nursing intervention of patient who is suffering with panic anxiety neurosis. [8]
 5. **Write short notes on[any FOUR]:** [4x5=20]
 - a. Mental retardation.
 - b. Supportive psychotherapy.
 - c. Primary intervention.
 - d. Psychiatric rehabilitation.
 - e. Objectives of National mental health programme.
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