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SUBJECT CODE NO: - BNP-2737
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. (NEP) (P-2024) S.Y Sem III
Examination November / December 2025
Electronics (Power Supplies)

[Time: 1 Hours]**[Max. Marks: 30]**

N. B

Please check whether you have got the right question paper.

- 1) Question no. 1 is multiple choice objective and it is compulsory. It carries 10 marks
- 2) Attempt any four questions from Q.2 to Q.7 Each carries 5 marks.
- 3) figures to right indicate full marks.

Part - A**Q1 Attempt all MCQs.****10**

1. Which type of battery commonly used in mobile phones and is _____ rechargeable.

- a) Lead-Acid
- b) Lithium-ion
- c) Primary Zinc-Carbon
- d) Selenium.

2. The primary function of a Schottky diode in a power supply circuit is often:

- a) Voltage multiplication
- b) High Efficiency rectification
- c) filtering Ripple voltage
- d) Battery Charging.

3. A "slow blow" fuse designed to:

- a) react instantly to very small over-currents
- b) with stand temporary surge currents without blowing
- c) protect against voltage transients.
- d) Have a higher voltage rating than a fast blow-fuse.

4. The main purpose of a bleeder resistor in a power supply is to:

- a) Increase the output voltage
- b) regulate the output current
- c) Discharge filter capacitor when supply is off for safety
- d) Reduce the power factor.

5. In a capacitor input filter, the ripple factor

- a) Increase with an increase in load current
- b) Is independent of the load current
- c) Decreases with an increase in load current.
- d) Is zero under all conditions.

Part - B**Attempt any four questions from Q.2 to Q.7 Each carries 5 marks.****Q2 Explain the construction and working principle of a Solar cell.****05**

- Q3** Differentiate between primary and Secondary cells with suitable examples **05**
- Q4** What is the effect of adding a Capacitor across the load in a rectifier circuit? **05**
- Q5** Describe the working of a choke input filter. Why is it consider more suitable for high-current power Supplies? **05**
- Q6** What are the causes of arcing in switches? Explain the methods used for contact protection. **05**
- Q7** Explain the principle of voltage multiplier circuit with neat diagram. **05**

