No.	:	
	No.	No. :

Total No. of Questions: 11]

[Total No. of Printed Pages : 3

BPF-2234

M.Sc. (Final) Examination, 2022 PHYSICS

Paper - VII (B)

(Analog, Digital Systems and Communications)

Time: 3 Hours [Maximum Marks: 75

Section-A (Marks : $2 \times 10 = 20$)

Note: Answer all ten questions (Answer limit **50** words). Each question carries **2** marks.

Section–B (Marks: $5 \times 5 = 25$)

Note: Answer all five questions. Each question has internal choice (Answer limit200 words). Each question carries 5 marks.

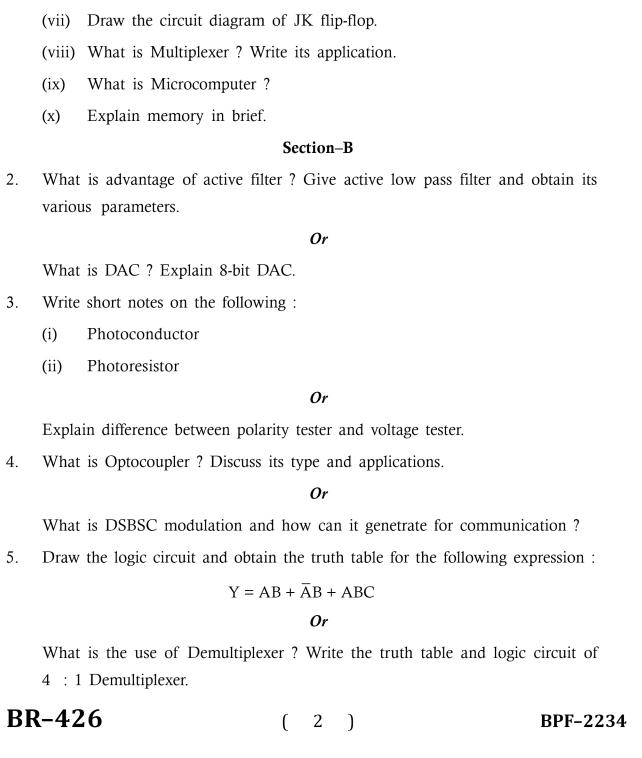
Section–C (Marks: $10 \times 3 = 30$)

Note: Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

Section-A

- 1. Attempt all questions :
 - (i) Draw circuit diagram of logarithmic amplifier.
 - (ii) Write two differences between ROM and RAM.

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What is principle of a photodetector?

What is Semiconductor Switch?

Define Modulation Index.

Which semiconductor is used for LED?

(iii)

(iv)

(v)

(vi)

6. What is addressing mode? Explain with suitable examples.

Or

Explain:

- (i) Counters
- (ii) Timing delay

Section-C

- 7. What is waveform generator? Draw and explain triangular wave generator.
- 8. Draw the circuit diagram of Numeric display unit and explain.
- 9. Explain Frequency Division Multiplexing (FDM) and give its applications.
- 10. Draw the circuit diagram of D-flip-flop and find its characteristic equation using function table.
- 11. Draw and explain architectural diagram of 8085.