



DPP-2948

First Year B. Sc. (Sem. II) Examination

March / April - 2016

Applied Electronics : Paper - I

(Electronics Switching Circuits)

Time : 2 Hours]

[Total Marks : 50

Instructions :

(1)

नीचे दशांशिक निशानीवाणी विगतो उत्तरवही पर अवश्य लिखनी. Fillup strictly the details of signs on your answer book.		Seat No. :	
Name of the Examination :		<input type="text"/>	
Name of the Subject :		<input type="text"/>	
Subject Code No. : <input type="text" value="2"/> <input type="text" value="9"/> <input type="text" value="4"/> <input type="text" value="8"/>		Section No. (1, 2,.....) : <input type="text" value="NIL"/>	
		Student's Signature	

- (2) All questions are compulsory.
- (3) Question - 1 carry 10 marks.
- (4) Questions - 2 and 3 carry 15 marks.
- (5) Question - 4 carry 10 marks.

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|---|--|----|
| 1 | Write short answers : | 10 |
| | (1) Draw the circuit diagram for capacitor charging. | 2 |
| | (2) What will be the value of the time constant RC if
$R = 100k\Omega$ and $C = 0.01 \mu F$ | 2 |
| | (3) What is Monostable multivibrator ? | 2 |
| | (4) Draw neat and clean circuit diagram for diode OR Gate. | 2 |
| | (5) What is DTL ? Explain briefly. | 2 |
| 2 | (1) What is Differentiation ? Draw and discuss the
differentiation for Pulse wave forms. | 10 |
| | (2) Draw the "Negative shunt clipper" and explain it
briefly. | 5 |

OR

- 2** (1) Draw and discuss the RC circuit response to Square Waves with suitable diagrams and equations. **10**
- (2) Draw the “Positive series clipper” and explain it briefly. **5**
- 3** (1) What is Timer? Draw and discuss the functional block diagram for IC-555. **10**
- (2) Draw neat and clean circuit diagram for “Astable multivibrator” and explain its working briefly. **5**
- OR**
- 3** (1) What do you mean by “Ideal Transistor Switch” ? Draw its ON and OFF conditions and explain its working in your words. **10**
- (2) Draw the time relationship between Base current and Collector current in a transistor switching circuit. Clearly indicate the “delay time, rise time, turn-off time, and storage time”. **5**
- 4** Write short notes : (any two) **10**
- (1) Diode as a switch **5**
- (2) Direct coupled inverter **5**
- (3) Diode and Gate **5**
- (4) 7400 TTL. **5**
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