

**DIPLOMA - VIEP - ELECTRONICS AND
COMMUNICATION ENGINEERING (DECVI)**

Term-End Examination

00294

June, 2017

**BIEL-037 : MAINTENANCE OF ELECTRONIC
EQUIPMENT**

Time : 2 hours

Maximum Marks : 70

Note : Attempt any **five** questions. Question no. 1 is **compulsory**. All questions carry equal marks. Missing data, if any, may be suitably assumed and mentioned.

1. Define the following terms : 7×2=14
- (a) Mean Time to Fail (MTTF)
 - (b) Failure Rate
 - (c) Mean Time Between Failure (MTBF)
 - (d) Mean Time to Repair (MTTR)
 - (e) Mean Time to Restore System
 - (f) Reliability
 - (g) Redundancy
2. (a) Define maintenance policy and different kinds of maintenance. 7
- (b) What is a maintenance work order ?
Explain, how down time can be reduced. 7

3. What is acceleration test ? Discuss the different types that are used to determine the reliability of an electronic equipment. 14
4. (a) What are the essentials of a good equipment management program ? Explain in brief about each element. 7
- (b) Define the terms Signal Injection and Signal Tracing. Explain the significance of these terms in testing of an electronic equipment. 3+4=7
5. (a) Discuss the environmental considerations that affect the working of an electronic equipment in detail and suggest remedies for them. 7+3=10
- (b) What is exponential law of reliability ? 4
6. Explain the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Steps for visual inspection
- (b) Role of service manual in trouble-shooting
- (c) Personal safety issues
- (d) Fault finding aids
7. Write short notes on the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Qualitative Maintenance
- (b) Di-assembly and Re-assembly
- (c) Functional Analysis
- (d) Software as a Trouble-shooting Aid