# Question paper code: J 9259

M.E. DEGREE EXAMINATION

First semester

Engineering design

PD 9211 — QUALITY CONCEPTS IN DESIGN

(Common to M.E. Computer aided design and M.E. Product Design and development)

(Regulation 2009)

Time: Three hours                                     Maximum: 100 marks

Answer ALL the questions.

PART A — (10 × 2 = 20 marks)

1.    Define quality function deployment?

2.    What are all the functions and advantages of QFD?

3.    Define embodiment checklist?

4.    Define refining geometry layout?

5.    Define orthogonality?

6.    Define two factorial experiments?

7.    Define frequency distribution?

8.    Define histogram?

9.    Define six sigma?

10.   Draw the six sigma chart? Where it is used?

PART B — (5 × 16 = 80 marks)

11.  (a)  Explain QFD in detail? State its benefits with suitable examples?           (16)

Or

(b)  Explain Design for Robustness in detail?                                         (16)

12.  (a)  Explain basic methods of FMEA in detail?                                    (16)

Or

(b)  Explain Embodiment Checklist in detail?                                          (16)

13.  (a)  Explain Design of Experiments (DOE) in detail                               (16)

Or

(b)  Explain the basic methods of DOE in detail with examples?                        (16)

14.  (a)  Explain frequency distribution in detail?                                   (16)

Or

(b)  Explain histogram in detail with a neat sketch?                                  (16)

15.  (a)  Explain the basics of six sigma in detail?                                  (16)

Or

(b)  How will you select project for six sigma?                                       (16)

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