



BAMR15

HARYANA VISHWAKARMA SKILL UNIVERSITY

(Established under the Government of Haryana Act of Legislation No 25/2016)

Course : B.Voc. (Automotive Mechatronics)
Subject : Measurement & Metrology
Semester : 2nd
Subject Code : BBME-104
Duration : 3 Hours
Maximum Marks : 35

Instructions to the Students

1. This Question paper consists of two Sections. All sections are compulsory.
2. **Section A** comprises ten questions of objective type in nature. All questions are compulsory. Each question carries one mark.
3. **Section B** comprises six essay type questions out of which students need to do any five. Each question carries five marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled.

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SECTION-A (OBJECTIVE TYPE QUESTIONS)

(10×1= 10 Marks)

- Q1 The principle of 'Interchangeability' is normally employed for**
- a. Mass production
 - b. Production of identical parts
 - c. Parts within the prescribed limits of sizes
 - d. All of the above
- Q2 The following is not a method to find effective thread diameter**
- a. Thread micrometer
 - b. Two wire method
 - c. Three wire method
 - d. The v-piece method
- Q3 The degree of closeness of the measured value of a certain quantity with its true value is known as**
- a. Accuracy
 - b. Precision
 - c. Standard
 - d. Sensitivity
- Q4 Error of measurement =**
- a. True value – Measured value
 - b. Precision – True value
 - c. Measured value – Precision
 - d. None of the above
- Q5 Which gauge is used to check the clearance between the two mating parts.**
- a. Screw gauge
 - b. Radius gauge
 - c. Feeler gauge
 - d. Wire gauge

Q6 The following is used to check the diameters of holes

- a. Plug gauge
- b. Ring gauge
- c. Slip gauge
- d. Standard screw pitch gauge

Q7 The following is not used to measure angles

- a. Bevel protectors
- b. Calibrated levels
- c. Clinometers
- d. Optical flats

Q8 A shaft rotating in a bushed bearing is good example of

- a. Sliding fit
- b. Push fit
- c. Running fit
- d. Driving fit

Q9 The following is not used to measure angles

- a. Bevel protectors
- b. Calibrated levels
- c. Clinometers
- d. Optical flats

Q10 The following is not a method to find effective thread diameter

- a. Thread micrometer
- b. Two wire method
- c. The v-piece method
- d. Three wire method

SECTION-B (EASSY TYPE QUESTIONS)

(5×5= 25 Marks)

- Q11** What do mean by measurement? Explain different methods of measurement.
- Q12** What do you mean by Comparators? Explain their types with the help of a diagram.
- Q13** A) Describe Linear and angular measurements in brief.
B) Explain concept of fitting tightening and torquing in line.
- Q14** Explain Gear measurement and its different types used in Industries.
- Q15** What do you mean by GD & T? Discuss the various parameters of measurement of GD &T in details.
- Q16** Explain different types of errors occur in measurement with suitable examples and discuss the mean adopted to minimize these errors.

-----**END OF PAPER**-----

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The success of these initiatives is measured by key performance indicators (KPIs) such as revenue growth, profit margins, and customer retention rates. We have seen significant progress in these areas over the past quarter, and we are confident that continued focus on these initiatives will lead to long-term success.

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