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| Sl. No | | | | | | | | | | |

Form No. Ex- 8

Particulars about the candidate and the subject are **checked thoroughly** and corrected where necessary.



| CENTRE CODE | : |
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Invigilator

Signature of Officer-in-Charge

| | Paper: 01 | | |
|----------|---|----------|-------|
| | Basics of Engine (Theory) | | |
| | Time: 2 Hrs. Full Marks: 50 | | |
| Enro | olment Number | | |
| Med | ium of Answer: | Que. No. | Marks |
| | | | |
| | INSTRUCTIONS TO CANDIDATES | | |
| | | | |
| 1. | This booklet contains 16 Pages. | | *(|
| 2. | An Examinee is allowed to bring only Admission Card and | | |
| | Identity Card to the Examination Hall. Any Examinee found | | |
| _ | in possession of loose papers, books etc. is liable to be Expelled. | - | - ¥ |
| 3. | Enrolment No. and Medium of answer must be written legibly | | |
| | at the specified places. Examinee's name and any other | | |
| | identifying mark which reveals examinees identity shall not be | | |
| 1 | written anywhere in the script. For Making calculations, only the last page provided for rough | | |
| 4. | work shall be used. | | |
| 5 | No pages of the script be torn out. | | |
| 5. 6. | Calculators will not be allowed for making calculations in the | | |
| 0. | examination hall. MOBILE PHONES are strictly prohibited | | |
| | in the examination Centre. | | |
| 7. | No candidate will be allowed to leave or go out of the hall | | |
| 7 * | during the First hour of the Examination. | | |
| 8. | A candidate having completed his/her answer, the script must | | |
| | be handed over, to an invigilator before leaving the hall. | 8.7 5. | |
| 9. | Contravention of any of the instructions mentioned above | | |
| | shall render a candidate liable for disciplinary action as per | | |
| | regulations of the University. | | |
| xan | niner's Signature : | | |
| | niner's Full Name : | | |
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| erut | iniser's Signature : | Total | |
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Head Examiner's Signature:

1. Answer any six from the following questions

 $2 \times 6 = 12$

- (a) What is meant by Automobile?
- (b) What is the function of inlet and exhaust valve?
- (c) What are the functions performed by a carburetor?
- (d) Which are the main parts of a carburetor?
- (e) Why is battery ignition system not preferred in 2-wheelers?
- (f) What is the function of fuel injection pump?
- (g) What will happen, if lubrication is not done in an automobile?
- (h) Name four important parts of an engine, which require lubrication.

2. Answer any five from the following questions

- $4 \times 5 = 20$
- (a) What type of carburetor is used in two-wheeler? Explain with a suitable diagram.
- (b) Draw the layout of a battery ignition system circuit.
- (c) What do you understand by advance or retard of the ignition system?
- (d) What is the function of thermostat valve in water cooling system? How does it work?
- (e) Explain the thermo-syphon system.
- (f) What are the different methods of cooling the engine? Why anti freeze solution is added in the liquid cooling system.

3. Answer any one from the following questions

 $8 \times 1 = 8$

(a) Draw the layout of the diesel fuel feed system and name its various components. Describe with a neat figure the working of common rail injection system.

(b) What is knoking in I.C. engine? State the causes of knocking. What is engine tuning? Explain it.

4. Answer any one from the following questions

- $10 \times 1 = 10$
- (a) Explain how a two-stroke petrol engine operate. Describe the operation of four-stroke cycle engine (petrol or diesel).
- (b) Describe how the cam shaft open the valve. Discuss in brief the function of air cleaner.