

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III (New) EXAMINATION – WINTER 2018****Subject Code: 2134001****Date: 28/11/2018****Subject Name: Machineries & Equipments****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

MARKS

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|------------|---|-----------|
| Q.1 | (a) Classify earthmoving operations | 03 |
| | (b) Discuss use and types of feeders. | 04 |
| | (c) Explain Operating principle, components, construction, working, application, advantages-limitations of any one of the Graders with neat sketch. | 07 |
| Q.2 | (a) Describe necessity and use of screening equipment after crushing. | 03 |
| | (b) Enumerate requirements of dredging. | 04 |
| | (c) Explain Operating principle, components, construction, working, application, advantages-limitations of drum mixer asphalt plant with neat sketch. | 07 |
| | OR | |
| | (c) Write detail note on 5S system. | 07 |
| Q.3 | (a) Enumerate and explain factors affecting selection of concrete pump. | 03 |
| | (b) Explain capital budgeting techniques. | 04 |
| | (c) Write a note on Industrial safety. | 07 |
| | OR | |
| Q.3 | (a) Explain methodology of asphalt distribution. | 03 |
| | (b) What is tunneling? Explain in brief history and equipment used for tunneling. | 04 |
| | (c) Write a note on accident investigation and prevention program | 07 |
| Q.4 | (a) Explain Operating principle, components, construction, working, application, advantages-limitations of following Conveyors with neat sketch. | 07 |
| | a. Belt | |
| | b. Escalators | |
| | (b) Write Crushers types – characteristics matrix. | 07 |
| | OR | |
| Q.4 | (a) Explain with neat sketch. | 07 |
| | a. Crane with rotary pillar | |
| | b. Cantilever crane | |
| | (b) Explain Operating principle, components, construction, working, application, advantages-limitations of Excavator with neat sketch. | 07 |

Q.5 (a) What is hook? Classify hooks. Explain any one type of hook with neat sketch **07**
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(b) Explain Operating principle, components, construction, working, application, advantages-limitations of ready mix concrete plant with neat sketch. **07**

OR

Q.5 (a) Explain Operating principle, components, construction, working, application, advantages-limitations of following tunneling equipment with neat sketch. **07**

- a. Road header
- b. Tunnel boring machine

(b) Explain Operating principle, components, construction, working, application, advantages-limitations of any kind of cooling tower with neat sketch. **07**

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