

Ref. No.: Ex/PROD/PE/B/T/421A/2024

B.Prod.E 4<sup>th</sup> Year 2<sup>nd</sup> Semester Examination 2024

Subject: TRIBOLOGY

Time: 3 hours

Full marks: 100

Answer any five questions:

1. a) Elucidate the system concept. 10  
b) Discuss the importance of studying “Stribeck Curve”. 10
2. Expound various wear models. 20
3. Explicate the ferrography analysis for used oil. 20
4. Explain the Hertzian Contact Stress. 20
5. a) Deduce Petroff’s equation mentioning the assumptions made. 15  
b) What do you mean by stoke’s law? 5
6. a) Derive P-V factor for  
i) Flat bearing  
ii) Sleeve bearing 18  
b) What do you mean by surface parameters? 2
7. Deduce the Classical Reynold’s Equation for one-dimensional flow. Also outline the assumptions made. 20