

Roll No. 178235083

Total No. of Questions : 6]

[Total No. of Printed Pages : 4

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**B.E. IIInd Semester (CGPA)
Examination, 2017**

EF-316

**CIVIL ENGG.
(Engg. Physics)
Paper : CE-202**

Time : 3 Hours]

[Maximum Marks : 60

Note :- All questions are compulsory and carry equal marks.
Internal choice is given in each question, except first question.

1. Choose the correct answer :

- (a) In Newton's ring arrangement the diameter of rings formed is proportional to :

(i) λ

(ii) λ^2

(iii) $\sqrt{\lambda}$

(iv) $\sqrt{\frac{1}{\lambda}}$

SS-316

(1)

Turn Over

ive, presented the certificate to Jack Robinson, Manager of the CN Tower on the EdgeWalk (1,168ft above the ground!

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(2)

Low, the Guinness World Records® Canadian representative, presented the certificate to Jack Robinson, Operating Officer of the CN Tower on the EdgeWalk 56m/1,168ft above the ground.

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Explain the conditions for maxima and minima for diffraction at a single slit.

3. (a) What is a wave function ? What are the necessary conditions of Physically acceptable wave function ? 4

(b) Establish the relation between group velocity, Phase velocity and Particle velocity. 6

Or

What is Compton effect ? Derive an expression for Compton shift. 6

4. (a) The frequency of SMHz is applied to dees of cyclotron. Calculate the magnetic induction to accelerate a particle of mass 1.602×10^{-27} kg. 4

(b) What is a Betatron ? Derive the betatron condition for successful acceleration of electrons. 6

Or

Describe a nuclear reactor. How does it work ? 6

.., the Guinness World Records® Canadian
native, presented the certificate to Jack Robinson,
Managing Officer of the CN Tower on the EdgeWalk
at 1,168ft above the ground!



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5. (a) What are cardinal points of a coaxial optical system ? 4

(b) Describe construction and working of a Ramsden's eyepiece. 6

Or

Two thin convex lenses of focal lengths 12 cm and 4 cm are separated by 8 cm. Plot the positions of the cardinal points for the combination. 6

6. Discuss in detail Foebes method for finding the coefficient of thermal conductivity of a metal bar.

Or

What is Stefan's law of radiation ? Give a laboratory method for determining Stefan's constant. 10