



**R. D. Engineering College, Ghaziabad College Code-231**  
Approved by AICTE & Affiliated to Dr. APJ Abdul Kalam Technical University, Lucknow

**Pushplata Scholarship Scheme**  
**Policy(Year 2021-22)**

Date:- 15-06-2021

On the Basis of Admission test conducted for the students taking admissions in B.Tech 1<sup>st</sup> Year of all the Courses, College Management has decided to provide Scholarship to these Students in the form of Fee Concession in their 1<sup>st</sup> Year Fees.

The Criteria for scholarship is as follows:-

Students Scoring

- 90% and above will get Concession Rs 10,000.

  
R.D. Engineering College  
Duhai, Ghaziabad  
Dr. Sanjeev Sharma

(Director)


Cc To

- All HODs
- Chief Finance Officer
- Accounts Department
- IQAC



  
Registrar  
R.D. Engineering College  
Ghaziabad

  
Director  
R.D. Engineering College  
Duhai, Ghaziabad

  
Deah Academics  
R.D. Engineering College  
Duhai, Ghaziabad

Faint, illegible markings or text in the upper left quadrant.

R.D. 10

Faint, illegible markings or text in the lower left quadrant.

R.D. 10



# R.D. ENGINEERING COLLEGE, GHAZIABAD

## PUSHPLATA SCHOLARSHIP SCHEME (DETAILS)

Session: 2021-22

S.NO	ROLL NO	NAME	FATHER'S NAME	BRANCH	YEAR	TOTAL FEE (Rs)	CONCESSION PROVIDED (Rs)
1	2102310100013	Altaf	Rafeek Mohammad	CS	1st	60000	10000
2	2102310100015	Aman Yadav	Roop Kishor Yadav	CS	1st	60000	10000
3	2102310100021	Aryan Tyagi	Kapil Tyagi	CS	1st	60000	10000
4	2102310100024	Ashish Kumar	Vipin Kumar	CS	1st	60000	10000
5	2102310100023	Ashish Kumar	Naveen Kumar	CS	1st	60000	10000
6	2102310100027	Ayush Jha	Rash Mohan Jha	CS	1st	60000	10000
7	2102310100031	Deepak Mittal	Manish Mittal	CS	1st	60000	10000
8	2102310100040	Harsh Kumar	Brijesh	CS	1st	60000	10000
9	2102310100041	Harsh Sharma	Jaidutt Sharma	CS	1st	60000	10000
<b>Total concession</b>						<b>Provided :</b>	<b>₹ 90,000</b>

Registrar  
R.D. Engineering College  
Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad

Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad



10/10/10

Director

10/10/10



# Pushplata Scholarship Scheme

Qualifying Examination

Time: - 2 Hrs

Admission Year – (2021-22)

Name of Applicant: - A.Haf.

Father's Name: - Rafeek Mohammad

Branch (to be opted):- C.S.

28  
30



**Note:- Attempt all Questions. Each question is of 1 mark.**

Q1. Value of  $\lim_{x \rightarrow 0} \frac{\tan x}{\log(1+x)}$  is

- (a) 1 (b) 0 (c) does not exist (d) none of these ✓

Q2. If  $y^{1/n} = x + \sqrt{1+x^2}$  then the value of  $(1+x^2)y^2 + xy^1$  is

- (a)  $n^2y$  (b)  $ny^2$  (c)  $n^2y^2$  (d) none of these ✓

Q3. If  $x^{\cos y} + y^{\cos x} = 5$  then at

- (a)  $x=0, y=0, \frac{dy}{dx}=0$  (b)  $x=0, y=1, \frac{dy}{dx}=0$  (c)  $x=1, y=1, \frac{dy}{dx}=-1$  (d)  $x=1, y=0, \frac{dy}{dx}=1$  ✓

Q4. If  $\sin(x+y) = \log(x+y)$  then  $\frac{dy}{dx}$  is

- (a) 2 (b) -2 (c) 1 (d) -1 ✓

5. The probability that the 13th day of a randomly chosen month is second Saturday is

- (a)  $\frac{1}{7}$  (b)  $\frac{1}{12}$  (c)  $\frac{1}{84}$  (d)  $\frac{19}{84}$  ✓

6. A single letter is chosen random from the word PROBABILITY. The probability that the word is a vowel is

- (a)  $\frac{2}{11}$  (b)  $\frac{3}{11}$  (c)  $\frac{4}{11}$  (d) none of these ✓

Registrar  
R.D. Engineering College  
Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad

Dean  
R.D. Engineering College  
Duhai, Ghaziabad



7. A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream.

- (a) 2 (b) 3 (c) 4 (d) 5

8. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through: (a)  $145^\circ$  (b)  $150^\circ$  (c)  $155^\circ$  (d)  $160^\circ$

9. In one hour, a boat goes 11 km/hr along the stream and 5 km/hr against the stream. The speed of the boat in still water (in km/hr) is:

- (a) 3 (b) 8 (c) 5 (d) 9

10. Which of the following is statement –

- (a) Mathematics is easy (b) come here (c) all real no are complex no. (d) he is an engineer.

11. A ball moves in a frictionless inclined table without slipping. The work done by the table surface on the ball is

- (a) Negative (b) Zero (c) Positive (d) None of the options

12. The potential energy of a system increases if work is done

- (a) upon the system by a non-conservative force (b) by the system against a conservative force

- (c) by the system against a non-conservative force (d) upon the system by a conservative force

13. If a light body and heavy body have same kinetic energy, then which one has greater linear momentum?

- (a) Lighter body (b) Heavier body (c) Both have same momentum (d) Can't be predicted

14. A light and a heavy body have equal momentum. Which one has greater K.E.?

- (a) The lighter body (b) The heavier body (c) Both have equal K.E. (d) Data given is incomplete

15. Unit of energy is

- (a) kwh (b) joule (c) electron volt (d) All of the above

16. Which of the following is not a conservative force?

- (a) Gravitational force (b) Frictional force (c) Spring force (d) None of these

17. The speed of an object of mass  $m$  dropped from an inclined plane (frictionless), at the bottom of the plane, depends on:

- (a) height of the plane above the ground (b) angle of inclination of the plane

- (c) mass of the object (d) All of these

18. A body projected vertically from the earth reaches a height equal to earth's radius before returning to the earth. The power exerted by the gravitational force is greatest

- (a) at the instant just before the body hits the earth (b) at the highest position of the body

(c) it remains constant all through

(d) at the instant just after the body is projected.

19. If two particles are brought near one another, the potential energy of the system will

(a) increase

(b) decrease

(c) remains the same

(d) equal to the K.E.

20. When two spheres of equal masses undergo perfect inelastic collision with one of them at rest, after collision they will move

(a) opposite to one another

(b) in the same direction

(c) together

(d) at right angle to each other

21. What is the term for a liquid dispersion in another liquid?

a) Emulsion

b) Aerosol

c) Gel

d) Foam

22. More than one sort of hybridization can occur in a complex with geometry.

a) tetrahedral

b) octahedral

c) trigonal bipyramidal

d) square planar

23. Determine the proper name for  $K_2[PdCl_4]$ .

a) Potassium tetrachlorinepalladium(II)

b) Potassium tetrachloridopalladate(II)Potassium

c) Potassium tetrachloridopalladium(II)

d) tetrachlorinepalladate(II)

24. Which substance is used to determine the hardness of water using a simple titration?

a) Mg(EDTA)

b) Fe(EDTA)

c)  $Na_2$ (EDTA)

d) Co(EDTA)

25. The core atom of which of the following biologically significant coordination molecules is magnesium?

a) Vitamin B12

b) Haemoglobin

c) Chlorophyll

d) Carboxypeptidase-A

26. What form does nitrogen take in plants?

a) Ammonia

b) Amide

c) Nitrate

d) Nitrite

27. What happens to the size of atoms in p-block elements when we move from left to right in the same period?

a) Size does not change

b) Size increases then decreases

c) Size increases

d) Size decreases

28. When ammonia is oxidized to form nitric acid, what catalyst is used?

a) Platinum-Rhodium gauze

b) Vanadium (V) oxide

c) Palladium hydride

d) Sodium amalgam

29. Which of the following compounds has an oxidation state of +5 phosphorus?

a) Peroxodiphosphoric acid

b) Hypophosphorous acid

c) Orthophosphorous acid

d) Hypophosphoric acid

30. Why is nitrogen preferred in the welding and cooling of materials?

a) It is an inert gas

b) It is non-toxic

c) It's a gas and can easily be handled

d) It has an extremely low freezing point

Registered  
R.D. Engineering College  
Ghaziabad

Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad



Main body of faint, illegible text, possibly a letter or report, occupying the upper right portion of the page.

Second section of faint, illegible text, continuing the document's content.

R.D. Engineering College  
Ghaziabad

R.D. Engineering College  
Ghaziabad





# Pushplata Scholarship Scheme

Qualifying Examination

Time: - 2 Hrs

Admission Year – (2021-22)

Name of Applicant: - ...Harish Sharma

Father's Name: - ...Jaidutt Sharma

Branch (to be opted):- ...CS...



**Note:- Attempt all Questions. Each question is of 1 mark.**

Q1. Value of  $\lim_{x \rightarrow 0} \frac{\tan x}{\log(1+x)}$  is

- (a) 1 (b) 0 (c) does not exist (d) none of these ✓

Q2. If  $y^{1/n} = x + \sqrt{1+x^2}$  then the value of  $(1+x^2)y^2 + xy^1$  is

- (a)  $n^2y$  (b)  $ny^2$  (c)  $n^2y^2$  (d) none of these ✓

Q3. If  $x^{\cos y} + y^{\cos x} = 5$  then at

- (a)  $x=0, y=0, \frac{dy}{dx}=0$  (b)  $x=0, y=1, \frac{dy}{dx}=0$  (c)  $x=1, y=1, \frac{dy}{dx}=-1$  (d)  $x=1, y=0, \frac{dy}{dx}=1$  ✓

Q4. If  $\sin(x+y) = \log(x+y)$  then  $\frac{dy}{dx}$  is

- (a) 2 (b) -2 (c) 1 (d) -1 ✓

5. The probability that the 13th day of a randomly chosen month is second Saturday is

- (a)  $\frac{1}{7}$  (b)  $\frac{1}{12}$  (c)  $\frac{1}{84}$  (d)  $\frac{19}{84}$

6. A single letter is chosen random from the word PROBABILITY. The probability that the word is a vowel is

- (a)  $\frac{2}{11}$  (b)  $\frac{3}{11}$  (c)  $\frac{4}{11}$  (d) none of these ✓

R.D. Engineering College  
Ghaziabad

Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad

7. A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream.

- (a) 2 (b) 3 (c) 4 (d) 5

8. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through: (a)  $145^\circ$  (b)  $150^\circ$  (c)  $155^\circ$  (d)  $160^\circ$

9. In one hour, a boat goes 11 km/hr along the stream and 5 km/hr against the stream. The speed of the boat in still water (in km/hr) is:

- (a) 3 (b) 8 (c) 5 (d) 9

10. Which of the following is statement –

- (a) Mathematics is easy (b) come here (c) all real no are complex no. (d) he is an engineer.

11. A ball moves in a frictionless inclined table without slipping. The work done by the table surface on the ball is

- (a) Negative (b) Zero (c) Positive (d) None of the options

12. The potential energy of a system increases if work is done

- (a) upon the system by a non-conservative force (b) by the system against a conservative force  
(c) by the system against a non-conservative force (d) upon the system by a conservative force

13. If a light body and heavy body have same kinetic energy, then which one has greater linear momentum?

- (a) Lighter body (b) Heavier body (c) Both have same momentum (d) Can't be predicted

14. A light and a heavy body have equal momentum. Which one has greater K.E.?

- (a) The lighter body (b) The heavier body (c) Both have equal K.E. (d) Data given is incomplete

15. Unit of energy is

- (a) kwh (b) joule (c) electron volt (d) All of the above

16. Which of the following is not a conservative force?

- (a) Gravitational force (b) Frictional force (c) Spring force (d) None of these

17. The speed of an object of mass  $m$  dropped from an inclined plane (frictionless), at the bottom of the plane, depends on:

- (a) height of the plane above the ground (b) angle of inclination of the plane  
(c) mass of the object (d) All of these

18. A body projected vertically from the earth reaches a height equal to earth's radius before returning to the earth. The power exerted by the gravitational force is greatest

- (a) at the instant just before the body hits the earth (b) at the highest position of the body



(c) it remains constant all through

(d) at the instant just after the body is projected.

19. If two particles are brought near one another, the potential energy of the system will

(a) increase

(b) decrease

(c) remains the same

(d) equal to the K.E.

20. When two spheres of equal masses undergo perfect inelastic collision with one of them at rest, after collision they will move

(a) opposite to one another

(b) in the same direction

(c) together

(d) at right angle to each other

21. What is the term for a liquid dispersion in another liquid?

a) Emulsion

b) Aerosol

c) Gel

d) Foam

22. More than one sort of hybridization can occur in a complex with geometry.

a) tetrahedral

b) octahedral

c) trigonal bipyramidal

d) square planar

23. Determine the proper name for  $K_2[PdCl_4]$ .

a) Potassium tetrachlorinepalladium(II)

b) Potassium tetrachloridopalladate(II)Potassium

c) Potassium tetrachloridopalladium(II)

d) tetrachlorinepalladate(II)

24. Which substance is used to determine the hardness of water using a simple titration?

a)  $Mg(EDTA)$

b)  $Fe(EDTA)$

c)  $Na_2(EDTA)$

d)  $Co(EDTA)$

25. The core atom of which of the following biologically significant coordination molecules is magnesium?

a) Vitamin B12

b) Haemoglobin

c) Chlorophyll

d) Carboxypeptidase-A

26. What form does nitrogen take in plants?

a) Ammonia

b) Amide

c) Nitrate

d) Nitrite

27. What happens to the size of atoms in p-block elements when we move from left to right in the same period?

a) Size does not change

b) Size increases then decreases.

c) Size increases

d) Size decreases

28. When ammonia is oxidized to form nitric acid, what catalyst is used?

a) Platinum-Rhodium gauze

b) Vanadium (V) oxide

c) Palladium hydride

d) Sodium amalgam

29. Which of the following compounds has an oxidation state of +5 phosphorus?

a) Peroxodiphosphoric acid

b) Hypophosphorous acid

c) Orthophosphorous acid

d) Hypophosphoric acid

30. Why is nitrogen preferred in the welding and cooling of materials?

a) It is an inert gas

b) It is non-toxic

c) It's a gas and can easily be handled

d) It has an extremely low freezing point

Registered  
R.D. Engineering College  
Ghaziabad

Wakil  
Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad



Faint text centered near the top of the page.

Faint text centered in the upper middle section of the page.

Faint text in the upper right quadrant of the page.

Faint text in the middle right section of the page.

R. D. Engineering College  
1971

Director  
R. D. Engineering College  
Durai





# Pushplata Scholarship Scheme

Qualifying Examination

Time: - 2 Hrs

Admission Year – (2021-22)

Name of Applicant: Harsh Kumar

Father's Name: - Brijesh

Branch (to be opted):- CS

29  
30



**Note:- Attempt all Questions. Each question is of 1 mark.**

Q1. Value of  $\lim_{x \rightarrow 0} \frac{\tan x}{\log(1+x)}$  is

- (a) 1      (b) 0      (c) does not exist      (d) none of these

Q2. If  $y^{1/n} = x + \sqrt{1+x^2}$  then the value of  $(1+x^2)y^2 + xy^1$  is

- (a)  $n^2y$       (b)  $ny^2$       (c)  $n^2y^2$       (d) none of these

Q3. If  $x^{\cos y} + y^{\cos x} = 5$  then at

- (a)  $x=0, y=0, \frac{dy}{dx}=0$       (b)  $x=0, y=1, \frac{dy}{dx}=0$       (c)  $x=1, y=1, \frac{dy}{dx}=-1$       (d)  $x=1, y=0, \frac{dy}{dx}=1$

Q4. If  $\sin(x+y) = \log(x+y)$  then  $\frac{dy}{dx}$  is

- (a) 2      (b) -2      (c) 1      (d) -1

5. The probability that the 13th day of a randomly chosen month is second Saturday is

- (a)  $\frac{1}{7}$       (b)  $\frac{1}{12}$       (c)  $\frac{1}{84}$       (d)  $\frac{19}{84}$

6. A single letter is chosen random from the word PROBABILITY. The probability that the word is a vowel is

- (a)  $\frac{2}{11}$       (b)  $\frac{3}{11}$       (c)  $\frac{4}{11}$       (d) none of these

Registrar  
R.D. Engineering College  
Ghaziabad

Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

Director  
R.D. Engineering College  
Ghaziabad

7. A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream.

- (a) 2 (b) 3 (c) 4 (d) 5

8. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through: (a)  $145^\circ$  (b)  $150^\circ$  (c)  $155^\circ$  (d)  $160^\circ$

9. In one hour, a boat goes 11 km/hr along the stream and 5 km/hr against the stream. The speed of the boat in still water (in km/hr) is:

- (a) 3 (b) 8 (c) 5 (d) 9

10. Which of the following is statement –

- (a) Mathematics is easy (b) come here (c) all real no are complex no. (d) he is an engineer.

11. A ball moves in a frictionless inclined table without slipping. The work done by the table surface on the ball is

- (a) Negative (b) Zero (c) Positive (d) None of the options

12. The potential energy of a system increases if work is done

- (a) upon the system by a non-conservative force (b) by the system against a conservative force  
(c) by the system against a non-conservative force (d) upon the system by a conservative force

13. If a light body and heavy body have same kinetic energy, then which one has greater linear momentum?

- (a) Lighter body (b) Heavier body (c) Both have same momentum (d) Can't be predicted

14. A light and a heavy body have equal momentum. Which one has greater K.E.?

- (a) The lighter body (b) The heavier body (c) Both have equal K.E. (d) Data given is incomplete

15. Unit of energy is

- (a) kwh (b) joule (c) electron volt (d) All of the above

16. Which of the following is not a conservative force?

- (a) Gravitational force (b) Frictional force (c) Spring force (d) None of these

17. The speed of an object of mass  $m$  dropped from an inclined plane (frictionless), at the bottom of the plane, depends on:

- (a) height of the plane above the ground (b) angle of inclination of the plane  
(c) mass of the object (d) All of these

18. A body projected vertically from the earth reaches a height equal to earth's radius before returning to the earth. The power exerted by the gravitational force is greatest

- (a) at the instant just before the body hits the earth (b) at the highest position of the body



(c) it remains constant all through

(d) at the instant just after the body is projected.

19. If two particles are brought near one another, the potential energy of the system will

(a) increase

(b) decrease

(c) remains the same

(d) equal to the K.E.

20. When two spheres of equal masses undergo perfect inelastic collision with one of them at rest, after collision they will move

(a) opposite to one another

(b) in the same direction

(c) together

(d) at right angle to each other

21. What is the term for a liquid dispersion in another liquid?

a) Emulsion

b) Aerosol

c) Gel

d) Foam

22. More than one sort of hybridization can occur in a complex with geometry.

a) tetrahedral

b) octahedral

c) trigonal bipyramidal

d) square planar

23. Determine the proper name for  $K_2[PdCl_4]$ .

a) Potassium tetrachlorinepalladium(II)

b) Potassium tetrachloridopalladate(II)Potassium

c) Potassium tetrachloridopalladium(II)

d) tetrachlorinepalladate(II)

24. Which substance is used to determine the hardness of water using a simple titration?

a)  $Mg(EDTA)$

b)  $Fe(EDTA)$

c)  $Na_2(EDTA)$

d)  $Co(EDTA)$

25. The core atom of which of the following biologically significant coordination molecules is magnesium?

a) Vitamin B12

b) Haemoglobin

c) Chlorophyll

d) Carboxypeptidase-A

26. What form does nitrogen take in plants?

a) Ammonia

b) Amide

c) Nitrate

d) Nitrite

27. What happens to the size of atoms in p-block elements when we move from left to right in the same period?

a) Size does not change

b) Size increases then decreases

c) Size increases

d) Size decreases

28. When ammonia is oxidized to form nitric acid, what catalyst is used?

a) Platinum-Rhodium gauze

b) Vanadium (V) oxide

c) Palladium hydride

d) Sodium amalgam

29. Which of the following compounds has an oxidation state of +5 phosphorus?

a) Peroxodiphosphoric acid

b) Hypophosphorous acid

c) Orthophosphorous acid

d) Hypophosphoric acid

30. Why is nitrogen preferred in the welding and cooling of materials?

a) It is an inert gas

b) It is non-toxic

c) It's a gas and can easily be handled

d) It has an extremely low freezing point

Registrar  
R.D. Engineering College  
Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad

Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

Registrar  
Engineering College  
Lahore

R.O. Engineer  
Dir. Engg.  
Distt. Gharo





# Pushplata Scholarship Scheme

Qualifying Examination

Time: - 2 Hrs

Admission Year - (2021-22)

Name of Applicant: - Ayushika

Father's Name: - Mr. Rashi Mohan Sharma

Branch (to be opted):- CS



**Note:- Attempt all Questions. Each question is of 1 mark.**

Q1. Value of  $\lim_{x \rightarrow 0} \frac{\tan x}{\log(1+x)}$  is

- (a) 1 (b) 0 (c) does not exist (d) none of these

Q2. If  $y^{1/n} = x + \sqrt{1+x^2}$  then the value of  $(1+x^2)y^2 + xy^2$  is

- (a)  $n^2y$  (b)  $ny^2$  (c)  $n^2y^2$  (d) none of these

Q3. If  $x^{\cos y} + y^{\cos x} = 5$  then at

- (a)  $x=0, y=0, \frac{dy}{dx}=0$  (b)  $x=0, y=1, \frac{dy}{dx}=0$  (c)  $x=1, y=1, \frac{dy}{dx}=-1$  (d)  $x=1, y=0, \frac{dy}{dx}=1$

Q4. If  $\sin(x+y) = \log(x+y)$  then  $\frac{dy}{dx}$  is

- (a) 2 (b) -2 (c) 1 (d) -1

5. The probability that the 13th day of a randomly chosen month is second Saturday is

- (a)  $\frac{1}{7}$  (b)  $\frac{1}{12}$  (c)  $\frac{1}{84}$  (d)  $\frac{19}{84}$

6. A single letter is chosen random from the word PROBABILITY. The probability that the word is a vowel is

- (a)  $\frac{2}{11}$  (b)  $\frac{3}{11}$  (c)  $\frac{4}{11}$  (d) none of these

Registrar  
R.D. Engineering College  
Ghaziabad

Wapi  
Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad

7. A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream.

- (a) 2 (b) 3  (c) 4 (d) 5

8. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through: (a)  $145^\circ$  (b)  $150^\circ$  (c)  $155^\circ$  (d)  $160^\circ$

9. In one hour, a boat goes 11 km/hr along the stream and 5 km/hr against the stream. The speed of the boat in still water (in km/hr) is:

- (a) 3  (b) 8 (c) 5 (d) 9

10. Which of the following is statement –

- (a) Mathematics is easy (b) come here  (c) all real no are complex no. (d) he is an engineer.

11. A ball moves in a frictionless inclined table without slipping. The work done by the table surface on the ball is

- (a) Negative  (b) Zero (c) Positive (d) None of the options

12. The potential energy of a system increases if work is done

- (a) upon the system by a non-conservative force  (b) by the system against a conservative force  
(c) by the system against a non-conservative force (d) upon the system by a conservative force

13. If a light body and heavy body have same kinetic energy, then which one has greater linear momentum?

- (a) Lighter body  (b) Heavier body (c) Both have same momentum (d) Can't be predicted

14. A light and a heavy body have equal momentum. Which one has greater K.E.?

- (a) The lighter body (b) The heavier body (c) Both have equal K.E. (d) Data given is incomplete

15. Unit of energy is

- (a) kwh (b) joule (c) electron volt  (d) All of the above

16. Which of the following is not a conservative force?

- (a) Gravitational force  (b) Frictional force (c) Spring force (d) None of these

17. The speed of an object of mass  $m$  dropped from an inclined plane (frictionless), at the bottom of the plane, depends on:

- (a) height of the plane above the ground (b) angle of inclination of the plane  
(c) mass of the object (d) All of these

18. A body projected vertically from the earth reaches a height equal to earth's radius before returning to the earth. The power exerted by the gravitational force is greatest

- (a) at the instant just before the body hits the earth (b) at the highest position of the body



(c) it remains constant all through

(d) at the instant just after the body is projected.

19. If two particles are brought near one another, the potential energy of the system will

(a) increase

(b) decrease

(c) remains the same

(d) equal to the K.E.

20. When two spheres of equal masses undergo perfect inelastic collision with one of them at rest, after collision they will move

(a) opposite to one another

(b) in the same direction

(c) together

(d) at right angle to each other

21. What is the term for a liquid dispersion in another liquid?

a) Emulsion

b) Aerosol

c) Gel

d) Foam

22. More than one sort of hybridization can occur in a complex with geometry,

a) tetrahedral

b) octahedral

c) trigonal bipyramidal

d) square planar

23. Determine the proper name for  $K_2[PdCl_4]$ .

a) Potassium tetrachlorinepalladium(II)

b) Potassium tetrachloridopalladate(II)Potassium

c) Potassium tetrachloridopalladium(II)

d) tetrachlorinepalladate(II)

24. Which substance is used to determine the hardness of water using a simple titration?

a) Mg(EDTA)

b) Fe(EDTA)

c)  $Na_2(EDTA)$

d) Co(EDTA)

25. The core atom of which of the following biologically significant coordination molecules is magnesium?

a) Vitamin B12

b) Haemoglobin

c) Chlorophyll

d) Carboxypeptidase-A

26. What form does nitrogen take in plants?

a) Ammonia

b) Amide

c) Nitrate

d) Nitrite

27. What happens to the size of atoms in p-block elements when we move from left to right in the same period?

a) Size does not change

b) Size increases then decreases

c) Size increases

d) Size decreases

28. When ammonia is oxidized to form nitric acid, what catalyst is used?

a) Platinum-Rhodium gauze

b) Vanadium (V) oxide

c) Palladium hydride

d) Sodium amalgam

29. Which of the following compounds has an oxidation state of +5 phosphorus?

a) Peroxodiphosphoric acid

b) Hypophosphorous acid

c) Orthophosphorous acid

d) Hypophosphoric acid

30. Why is nitrogen preferred in the welding and cooling of materials?

a) It is an inert gas

b) It is non-toxic

c) It's a gas and can easily be handled

d) It has an extremely low freezing point

Registrar  
R.D. Engineering College  
Ghaziabad

Wakil  
Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad  
Director  
R.D. Engineering College  
Duhai, Ghaziabad



Director  
R. D. Engineering College  
Dubai, Emirate of Dubai

REC-11-11-11  
11-11-11





# Pushplata Scholarship Scheme

Qualifying Examination

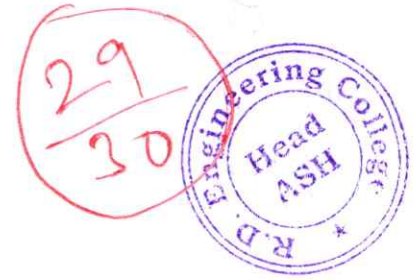
Time: - 2 Hrs

Admission Year – (2021-22)

Name of Applicant: Deeksh Mittal

Father's Name: - Manish Mittal

Branch (to be opted):- CS...



**Note:- Attempt all Questions. Each question is of 1 mark.**

Q1. Value of  $\lim_{x \rightarrow 0} \frac{\tan x}{\log(1+x)}$  is

- (a) 1 (b) 0 (c) does not exist (d) none of these

Q2. If  $y^{1/n} = x + \sqrt{1+x^2}$  then the value of  $(1+x^2)y^2 + xy^1$  is

- (a)  $n^2y$  (b)  $ny^2$  (c)  $n^2y^2$  (d) none of these

Q3. If  $x^{\cos y} + y^{\cos x} = 5$  then at

- (a)  $x=0, y=0, \frac{dy}{dx}=0$  (b)  $x=0, y=1, \frac{dy}{dx}=0$  (c)  $x=1, y=1, \frac{dy}{dx}=-1$  (d)  $x=1, y=0, \frac{dy}{dx}=1$

Q4. If  $\sin(x+y) = \log(x+y)$  then  $\frac{dy}{dx}$  is

- (a) 2 (b) -2 (c) 1 (d) -1

5. The probability that the 13th day of a randomly chosen month is second Saturday is

- (a)  $\frac{1}{7}$  (b)  $\frac{1}{12}$  (c)  $\frac{1}{84}$  (d)  $\frac{19}{84}$

6. A single letter is chosen random from the word PROBABILITY. The probability that the word is a vowel is

- (a)  $\frac{2}{11}$  (b)  $\frac{3}{11}$  (c)  $\frac{4}{11}$  (d) none of these

Registrar  
R.D. Engineering College  
Ghaziabad

Wakil  
Dean Academic  
R.D. Engineering College  
Duhai, Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad

7. A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream.

- (a) 2 (b) 3 ~~(c) 4~~ (d) 5

8. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through: (a)  $145^\circ$  (b)  $150^\circ$  (c)  $155^\circ$  ~~(d)  $160^\circ$~~

9. In one hour, a boat goes 11 km/hr along the stream and 5 km/hr against the stream. The speed of the boat in still water (in km/hr) is:

- (a) 3 ~~(b) 8~~ (c) 5 (d) 9

10. Which of the following is statement –

- (a) Mathematics is easy (b) come here ~~(c) all real no are complex no.~~ (d) he is an engineer.

11. A ball moves in a frictionless inclined table without slipping. The work done by the table surface on the ball is

- (a) Negative ~~(b) Zero~~ (c) Positive (d) None of the options

12. The potential energy of a system increases if work is done

- (a) upon the system by a non-conservative force ~~(b) by the system against a conservative force~~

- (c) by the system against a non-conservative force (d) upon the system by a conservative force

13. If a light body and heavy body have same kinetic energy, then which one has greater linear momentum?

- (a) Lighter body ~~(b) Heavier body~~ (c) Both have same momentum (d) Can't be predicted

14. A light and a heavy body have equal momentum. Which one has greater K.E.?

- ~~(a) The lighter body~~ (b) The heavier body (c) Both have equal K.E. (d) Data given is incomplete

15. Unit of energy is

- (a) kwh (b) joule (c) electron volt ~~(d) All of the above~~

16. Which of the following is not a conservative force?

- (a) Gravitational force ~~(b) Frictional force~~ (c) Spring force (d) None of these

17. The speed of an object of mass  $m$  dropped from an inclined plane (frictionless), at the bottom of the plane, depends on:

- ~~(a) height of the plane above the ground~~ (b) angle of inclination of the plane

- (c) mass of the object (d) All of these

18. A body projected vertically from the earth reaches a height equal to earth's radius before returning to the earth. The power exerted by the gravitational force is greatest

- ~~(a) at the instant just before the body hits the earth~~ (b) at the highest position of the body



(c) it remains constant all through

(d) at the instant just after the body is projected.

19. If two particles are brought near one another, the potential energy of the system will

(a) increase

(b) decrease

(c) remains the same

(d) equal to the K.E.

20. When two spheres of equal masses undergo perfect inelastic collision with one of them at rest, after collision they will move

(a) opposite to one another

(b) in the same direction

(c) together

(d) at right angle to each other

21. What is the term for a liquid dispersion in another liquid?

a) Emulsion

b) Aerosol

c) Gel

d) Foam

22. More than one sort of hybridization can occur in a complex with geometry.

a) tetrahedral

b) octahedral

c) trigonal bipyramidal

d) square planar

23. Determine the proper name for  $K_2[PdCl_4]$ .

a) Potassium tetrachlorinepalladium(II)

b) Potassium tetrachloridopalladate(II)Potassium

c) Potassium tetrachloridopalladium(II)

d) tetrachlorinepalladate(II)

24. Which substance is used to determine the hardness of water using a simple titration?

a) Mg(EDTA)

b) Fe(EDTA)

c)  $Na_2$ (EDTA)

d) Co(EDTA)

25. The core atom of which of the following biologically significant coordination molecules is magnesium?

a) Vitamin B12

b) Haemoglobin

c) Chlorophyll

d) Carboxypeptidase-A

26. What form does nitrogen take in plants?

a) Ammonia

b) Amide

c) Nitrate

d) Nitrite

27. What happens to the size of atoms in p-block elements when we move from left to right in the same period?

a) Size does not change

b) Size increases then decreases

c) Size increases

d) Size decreases

28. When ammonia is oxidized to form nitric acid, what catalyst is used?

a) Platinum-Rhodium gauze

b) Vanadium (V) oxide

c) Palladium hydride

d) Sodium amalgam

29. Which of the following compounds has an oxidation state of +5 phosphorus?

a) Peroxodiphosphoric acid

b) Hypophosphorous acid

c) Orthophosphorous acid

d) Hypophosphoric acid

30. Why is nitrogen preferred in the welding and cooling of materials?

a) It is an inert gas

b) It is non-toxic

c) It's a gas and can easily be handled

d) It has an extremely low freezing point

Registrar  
R.D. Engineering College  
Ghaziabad

Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad

Director  
R. D. Engineering Firm  
Dulles, Virginia





## Pushplata Scholarship Scheme

Qualifying Examination

Time: - 2 Hrs

Admission Year – (2021-22)

Name of Applicant: - Ashish Kumar

Father's Name: - Naveen Kumar

Branch (to be opted):- ....C.S....



**Note:- Attempt all Questions. Each question is of 1 mark.**

Q1. Value of  $\lim_{x \rightarrow 0} \frac{\tan x}{\log(1+x)}$  is

- (a) 1 (b) 0 (c) does not exist (d) none of these

Q2. If  $y^{1/n} = x + \sqrt{1+x^2}$  then the value of  $(1+x^2)y^2 + xy^1$  is

- (a)  $n^2y$  (b)  $ny^2$  (c)  $n^2y^2$  (d) none of these

Q3. If  $x^{\cos y} + y^{\cos x} = 5$  then at

- (a)  $x=0, y=0, \frac{dy}{dx}=0$  (b)  $x=0, y=1, \frac{dy}{dx}=0$  (c)  $x=1, y=1, \frac{dy}{dx}=-1$  (d)  $x=1, y=0, \frac{dy}{dx}=1$

Q4. If  $\sin(x+y) = \log(x+y)$  then  $\frac{dy}{dx}$  is

- (a) 2 (b) -2 (c) 1 (d) -1

5. The probability that the 13th day of a randomly chosen month is second Saturday is

- (a)  $\frac{1}{7}$  (b)  $\frac{1}{12}$  (c)  $\frac{1}{84}$  (d)  $\frac{19}{84}$

6. A single letter is chosen random from the word PROBABILITY. The probability that the word is a vowel is

- (a)  $\frac{2}{11}$  (b)  $\frac{3}{11}$  (c)  $\frac{4}{11}$  (d) none of these

Registrar  
R.D. Engineering College  
Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad

Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

7. A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream.

- (a) 2 (b) 3 (c) 4 (d) 5

8. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through: (a)  $145^\circ$  (b)  $150^\circ$  (c)  $155^\circ$  (d)  $160^\circ$

9. In one hour, a boat goes 11 km/hr along the stream and 5 km/hr against the stream. The speed of the boat in still water (in km/hr) is:

- (a) 3 (b) 8 (c) 5 (d) 9

10. Which of the following is statement –

- (a) Mathematics is easy (b) come here (c) all real no are complex no. (d) he is an engineer.

11. A ball moves in a frictionless inclined table without slipping. The work done by the table surface on the ball is

- (a) Negative (b) Zero (c) Positive (d) None of the options

12. The potential energy of a system increases if work is done

- (a) upon the system by a non-conservative force (b) by the system against a conservative force

- (c) by the system against a non-conservative force (d) upon the system by a conservative force

13. If a light body and heavy body have same kinetic energy, then which one has greater linear momentum?

- (a) Lighter body (b) Heavier body (c) Both have same momentum (d) Can't be predicted

14. A light and a heavy body have equal momentum. Which one has greater K.E.?

- (a) The lighter body (b) The heavier body (c) Both have equal K.E. (d) Data given is incomplete

15. Unit of energy is

- (a) kwh (b) joule (c) electron volt (d) All of the above

16. Which of the following is not a conservative force?

- (a) Gravitational force (b) Frictional force (c) Spring force (d) None of these

17. The speed of an object of mass  $m$  dropped from an inclined plane (frictionless), at the bottom of the plane, depends on:

- (a) height of the plane above the ground (b) angle of inclination of the plane

- (c) mass of the object (d) All of these

18. A body projected vertically from the earth reaches a height equal to earth's radius before returning to the earth. The power exerted by the gravitational force is greatest

- (a) at the instant just before the body hits the earth (b) at the highest position of the body



(c) it remains constant all through

(d) at the instant just after the body is projected.

19. If two particles are brought near one another, the potential energy of the system will

(a) increase

(b) decrease

(c) remains the same

(d) equal to the K.E.

20. When two spheres of equal masses undergo perfect inelastic collision with one of them at rest, after collision they will move

(a) opposite to one another

(b) in the same direction

(c) together

(d) at right angle to each other

21. What is the term for a liquid dispersion in another liquid?

a) Emulsion

b) Aerosol

c) Gel

d) Foam

22. More than one sort of hybridization can occur in a complex with geometry.

a) tetrahedral

b) octahedral

c) trigonal bipyramidal

d) square planar

23. Determine the proper name for  $K_2[PdCl_4]$ .

a) Potassium tetrachlorinepalladium(II)

b) Potassium tetrachloridopalladate(II)Potassium

c) Potassium tetrachloridopalladium(II)

d) tetrachlorinepalladate(II)

24. Which substance is used to determine the hardness of water using a simple titration?

a) Mg(EDTA)

b) Fe(EDTA)

c)  $Na_2(EDTA)$

d) Co(EDTA)

25. The core atom of which of the following biologically significant coordination molecules is magnesium?

a) Vitamin B12

b) Haemoglobin

c) Chlorophyll

d) Carboxypeptidase-A

26. What form does nitrogen take in plants?

a) Ammonia

b) Amide

c) Nitrate

d) Nitrite

27. What happens to the size of atoms in p-block elements when we move from left to right in the same period?

a) Size does not change

b) Size increases then decreases

c) Size increases

d) Size decreases

28. When ammonia is oxidized to form nitric acid, what catalyst is used?

a) Platinum-Rhodium gauze

b) Vanadium (V) oxide

c) Palladium hydride

d) Sodium amalgam

29. Which of the following compounds has an oxidation state of +5 phosphorus?

a) Peroxodiphosphoric acid

b) Hypophosphorous acid

c) Orthophosphorous acid

d) Hypophosphoric acid

30. Why is nitrogen preferred in the welding and cooling of materials?

a) It is an inert gas

b) It is non-toxic

c) It's a gas and can easily be handled

d) It has an extremely low freezing point

R.D. Engineering College  
Ghaziabad

Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad

Faint, illegible text at the top of the page, possibly a header or title.

Second section of faint, illegible text, appearing to be a list or series of entries.

Third section of faint, illegible text, continuing the list or series of entries.

Fourth section of faint, illegible text, continuing the list or series of entries.

Fifth section of faint, illegible text, continuing the list or series of entries.

Sixth section of faint, illegible text, continuing the list or series of entries.

1941  
1942  
1943  
1944  
1945

Register  
of  
Investing  
Company

1946  
1947  
1948  
1949  
1950





## Pushplata Scholarship Scheme

Qualifying Examination

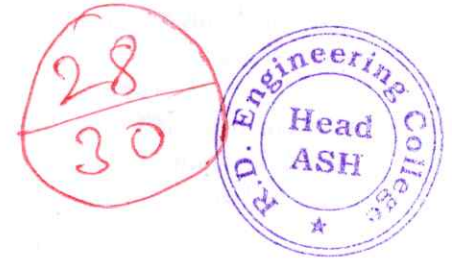
Time: - 2 Hrs

Admission Year – (2021-22)

Name of Applicant: - Aryan Tyagi

Father's Name: - Kapil Tyagi

Branch (to be opted):- CS



**Note:- Attempt all Questions. Each question is of 1 mark.**

Q1. Value of  $\lim_{x \rightarrow 0} \frac{\tan x}{\log(1+x)}$  is

- (a) 1      (b) 0      (c) does not exist      (d) none of these

Q2. If  $y^{1/n} = x + \sqrt{1+x^2}$  then the value of  $(1+x^2)y^2 + xy^1$  is

- (a)  $n^2y$       (b)  $ny^2$       (c)  $n^2y^2$       (d) none of these

Q3. If  $x^{\cos y} + y^{\cos x} = 5$  then at

- (a)  $x=0, y=0, \frac{dy}{dx}=0$       (b)  $x=0, y=1, \frac{dy}{dx}=0$       (c)  $x=1, y=1, \frac{dy}{dx}=-1$       (d)  $x=1, y=0, \frac{dy}{dx}=1$

Q4. If  $\sin(x+y) = \log(x+y)$  then  $\frac{dy}{dx}$  is

- (a) 2      (b) -2      (c) 1      (d) -1

5. The probability that the 13th day of a randomly chosen month is second Saturday is

- (a)  $\frac{1}{7}$       (b)  $\frac{1}{12}$       (c)  $\frac{1}{84}$       (d)  $\frac{19}{84}$

6. A single letter is chosen random from the word PROBABILITY. The probability that the word is a vowel is

- (a)  $\frac{2}{11}$       (b)  $\frac{3}{11}$       (c)  $\frac{4}{11}$       (d) none of these

Registrar  
R.D. Engineering College  
Ghaziabad

Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad

7. A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream.

- (a) 2 (b) 3 (c) 4 (d) 5

8. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through: (a)  $145^\circ$  (b)  $150^\circ$  (c)  $155^\circ$  (d)  $160^\circ$

9. In one hour, a boat goes 11 km/hr along the stream and 5 km/hr against the stream. The speed of the boat in still water (in km/hr) is:

- (a) 3 (b) 8 (c) 5 (d) 9

10. Which of the following is statement –

- (a) Mathematics is easy (b) come here (c) all real no are complex no. (d) he is an engineer.

11. A ball moves in a frictionless inclined table without slipping. The work done by the table surface on the ball is

- (a) Negative (b) Zero (c) Positive (d) None of the options

12. The potential energy of a system increases if work is done

- (a) upon the system by a non-conservative force (b) by the system against a conservative force

- (c) by the system against a non-conservative force (d) upon the system by a conservative force

13. If a light body and heavy body have same kinetic energy, then which one has greater linear momentum?

- (a) Lighter body (b) Heavier body (c) Both have same momentum (d) Can't be predicted

14. A light and a heavy body have equal momentum. Which one has greater K.E.?

- (a) The lighter body (b) The heavier body (c) Both have equal K.E. (d) Data given is incomplete

15. Unit of energy is

- (a) kwh (b) joule (c) electron volt (d) All of the above

16. Which of the following is not a conservative force?

- (a) Gravitational force (b) Frictional force (c) Spring force (d) None of these

17. The speed of an object of mass  $m$  dropped from an inclined plane (frictionless), at the bottom of the plane, depends on:

- (a) height of the plane above the ground (b) angle of inclination of the plane

- (c) mass of the object (d) All of these

18. A body projected vertically from the earth reaches a height equal to earth's radius before returning to the earth. The power exerted by the gravitational force is greatest

- (a) at the instant just before the body hits the earth (b) at the highest position of the body



(c) it remains constant all through

(d) at the instant just after the body is projected.

19. If two particles are brought near one another, the potential energy of the system will

(a) increase

(b) decrease

(c) remains the same

(d) equal to the K.E.

20. When two spheres of equal masses undergo perfect inelastic collision with one of them at rest, after collision they will move

(a) opposite to one another

(b) in the same direction

(c) together

(d) at right angle to each other

21. What is the term for a liquid dispersion in another liquid?

a) Emulsion

b) Aerosol

c) Gel

d) Foam

22. More than one sort of hybridization can occur in a complex with geometry.

a) tetrahedral

b) octahedral

c) trigonal bipyramidal

d) square planar

23. Determine the proper name for  $K_2[PdCl_4]$ .

a) Potassium tetrachlorinepalladium(II)

b) Potassium tetrachloridopalladate(II)Potassium

c) Potassium tetrachloridopalladium(II)

d) tetrachlorinepalladate(II)

24. Which substance is used to determine the hardness of water using a simple titration?

a) Mg(EDTA)

b) Fe(EDTA)

c)  $Na_2(EDTA)$

d) Co(EDTA)

25. The core atom of which of the following biologically significant coordination molecules is magnesium?

a) Vitamin B12

b) Haemoglobin

c) Chlorophyll

d) Carboxypeptidase-A

26. What form does nitrogen take in plants?

a) Ammonia

b) Amide

c) Nitrate

d) Nitrite

27. What happens to the size of atoms in p-block elements when we move from left to right in the same period?

a) Size does not change

b) Size increases then decreases

c) Size increases

d) Size decreases

28. When ammonia is oxidized to form nitric acid, what catalyst is used?

a) Platinum-Rhodium gauze

b) Vanadium (V) oxide

c) Palladium hydride

d) Sodium amalgam

29. Which of the following compounds has an oxidation state of +5 phosphorus?

a) Peroxodiphosphoric acid

b) Hypophosphorous acid

c) Orthophosphorous acid

d) Hypophosphoric acid

30. Why is nitrogen preferred in the welding and cooling of materials?

a) It is an inert gas

b) It is non-toxic

c) It's a gas and can easily be handled

d) It has an extremely low freezing point

*Vakil*  
Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

*[Signature]*  
Director  
R.D. Engineering College  
Duhai, Ghaziabad

Faint header text at the top of the page, possibly including a title or address.

Main body of faint, illegible text, likely the primary content of the document.

Second section of faint, illegible text, possibly a continuation of the main content or a separate section.

P. D. East 1911





# Pushplata Scholarship Scheme

Qualifying Examination

Time: - 2 Hrs

Admission Year – (2021-22)

Name of Applicant: - ..... Aman Yadav  
Father's Name: - ..... Roopkishor Yadav  
Branch (to be opted):- ..... CS

29  
30



**Note:- Attempt all Questions. Each question is of 1 mark.**

Q1. Value of  $\lim_{x \rightarrow 0} \frac{\tan x}{\log(1+x)}$  is

- (a) 1 (b) 0 (c) does not exist (d) none of these

Q2. If  $y^{1/n} = x + \sqrt{1+x^2}$  then the value of  $(1+x^2)y^2 + xy^2$  is

- (a)  $n^2y$  (b)  $ny^2$  (c)  $n^2y^2$  (d) none of these

Q3. If  $x^{\cos y} + y^{\cos x} = 5$  then at

- (a)  $x=0, y=0, \frac{dy}{dx}=0$  (b)  $x=0, y=1, \frac{dy}{dx}=0$  (c)  $x=1, y=1, \frac{dy}{dx}=-1$  (d)  $x=1, y=0, \frac{dy}{dx}=1$

Q4. If  $\sin(x+y) = \log(x+y)$  then  $\frac{dy}{dx}$  is

- (a) 2 (b) -2 (c) 1 (d) -1

5. The probability that the 13th day of a randomly chosen month is second Saturday is

- (a)  $\frac{1}{7}$  (b)  $\frac{1}{12}$  (c)  $\frac{1}{84}$  (d)  $\frac{19}{84}$

6. A single letter is chosen random from the word PROBABILITY. The probability that the word is a vowel is

- (a)  $\frac{2}{11}$  (b)  $\frac{3}{11}$  (c)  $\frac{4}{11}$  (d) none of these

Wakil  
Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad

7. A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream.

- (a) 2 (b) 3 (c) 4 (d) 5

8. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through: (a)  $145^\circ$  (b)  $150^\circ$  (c)  $155^\circ$  (d)  $160^\circ$

9. In one hour, a boat goes 11 km/hr along the stream and 5 km/hr against the stream. The speed of the boat in still water (in km/hr) is:

- (a) 3 (b) 8 (c) 5 (d) 9

10. Which of the following is statement –

- (a) Mathematics is easy (b) come here (c) all real no are complex no. (d) he is an engineer.

11. A ball moves in a frictionless inclined table without slipping. The work done by the table surface on the ball is

- (a) Negative (b) Zero (c) Positive (d) None of the options

12. The potential energy of a system increases if work is done

- (a) upon the system by a non-conservative force (b) by the system against a conservative force  
(c) by the system against a non-conservative force (d) upon the system by a conservative force

13. If a light body and heavy body have same kinetic energy, then which one has greater linear momentum?

- (a) Lighter body (b) Heavier body (c) Both have same momentum (d) Can't be predicted

14. A light and a heavy body have equal momentum. Which one has greater K.E.?

- (a) The lighter body (b) The heavier body (c) Both have equal K.E. (d) Data given is incomplete

15. Unit of energy is

- (a) kwh (b) joule (c) electron volt (d) All of the above

16. Which of the following is not a conservative force?

- (a) Gravitational force (b) Frictional force (c) Spring force (d) None of these

17. The speed of an object of mass  $m$  dropped from an inclined plane (frictionless), at the bottom of the plane, depends on:

- (a) height of the plane above the ground (b) angle of inclination of the plane  
(c) mass of the object (d) All of these

18. A body projected vertically from the earth reaches a height equal to earth's radius before returning to the earth. The power exerted by the gravitational force is greatest

- (a) at the instant just before the body hits the earth (b) at the highest position of the body



(c) it remains constant all through

(d) at the instant just after the body is projected.

19. If two particles are brought near one another, the potential energy of the system will

(a) increase

(b) decrease

(c) remains the same

(d) equal to the K.E.

20. When two spheres of equal masses undergo perfect inelastic collision with one of them at rest, after collision they will move

(a) opposite to one another

(b) in the same direction

(c) together

(d) at right angle to each other

21. What is the term for a liquid dispersion in another liquid?

a) Emulsion

b) Aerosol

c) Gel

d) Foam

22. More than one sort of hybridization can occur in a complex with geometry.

a) tetrahedral

b) octahedral

c) trigonal bipyramidal

d) square planar

23. Determine the proper name for  $K_2[PdCl_4]$ .

a) Potassium tetrachlorinepalladium(II)

b) Potassium tetrachloridopalladate(II)Potassium

c) Potassium tetrachloridopalladium(II)

d) tetrachlorinepalladate(II)

24. Which substance is used to determine the hardness of water using a simple titration?

a) Mg(EDTA)

b) Fe(EDTA)

c)  $Na_2(EDTA)$

d) Co(EDTA)

25. The core atom of which of the following biologically significant coordination molecules is magnesium?

a) Vitamin B12

b) Haemoglobin

c) Chlorophyll

d) Carboxypeptidase-A

26. What form does nitrogen take in plants?

a) Ammonia

b) Amide

c) Nitrate

d) Nitrite

27. What happens to the size of atoms in p-block elements when we move from left to right in the same period?

a) Size does not change

b) Size increases then decreases

c) Size increases

d) Size decreases

28. When ammonia is oxidized to form nitric acid, what catalyst is used?

a) Platinum-Rhodium gauze

b) Vanadium (V) oxide

c) Palladium hydride

d) Sodium amalgam

29. Which of the following compounds has an oxidation state of +5 phosphorus?

a) Peroxodiphosphoric acid

b) Hypophosphorous acid

c) Orthophosphorous acid

d) Hypophosphoric acid

30. Why is nitrogen preferred in the welding and cooling of materials?

a) It is an inert gas

b) It is non-toxic

c) It's a gas and can easily be handled

d) It has an extremely low freezing point

R.D. Engineering College  
Ghaziabad

Wakil  
Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad

Faint header text at the top of the page, possibly including a date or reference number.

Upper section of faint, illegible text, possibly a list or a series of short paragraphs.

Middle section of faint, illegible text, continuing the list or paragraphs.

Lower middle section of faint, illegible text.

Bottom section of faint, illegible text, including a small stamp or signature area.

RDE  
D





## Pushplata Scholarship Scheme

Qualifying Examination

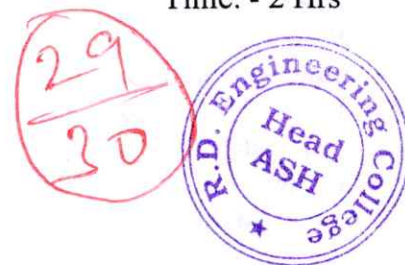
Time: - 2 Hrs

Admission Year – (2021-22)

Name of Applicant: - Ashish Kumar

Father's Name: - Vipin Kumar

Branch (to be opted):- CS



**Note:- Attempt all Questions. Each question is of 1 mark.**

Q1. Value of  $\lim_{x \rightarrow 0} \frac{\tan x}{\log(1+x)}$  is

- (a) 1 (b) 0 (c) does not exist (d) none of these

Q2. If  $y^{1/n} = x + \sqrt{1+x^2}$  then the value of  $(1+x^2)y^2 + xy^1$  is

- (a)  $n^2y$  (b)  $ny^2$  (c)  $n^2y^2$  (d) none of these

Q3. If  $x^{\cos y} + y^{\cos x} = 5$  then at

- (a)  $x=0, y=0, \frac{dy}{dx}=0$  (b)  $x=0, y=1, \frac{dy}{dx}=0$  (c)  $x=1, y=1, \frac{dy}{dx}=-1$  (d)  $x=1, y=0, \frac{dy}{dx}=1$

Q4. If  $\sin(x+y) = \log(x+y)$  then  $\frac{dy}{dx}$  is

- (a) 2 (b) -2 (c) 1 (d) -1

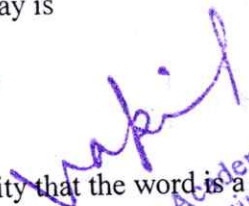
5. The probability that the 13th day of a randomly chosen month is second Saturday is

- (a)  $\frac{1}{7}$  (b)  $\frac{1}{12}$  (c)  $\frac{1}{84}$  (d)  $\frac{19}{84}$

6. A single letter is chosen random from the word PROBABILITY. The probability that the word is a vowel is

- (a)  $\frac{2}{11}$  (b)  $\frac{3}{11}$  (c)  $\frac{4}{11}$  (d) none of these

  
Registrar  
R.D. Engineering College  
Duhai, Ghaziabad

  
Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad

7. A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream.

- (a) 2 (b) 3 (c) 4 (d) 5

8. A clock is started at noon. By 10 minutes past 5, the hour hand has turned through: (a)  $145^\circ$  (b)  $150^\circ$  (c)  $155^\circ$  (d)  $160^\circ$

9. In one hour, a boat goes 11 km/hr along the stream and 5 km/hr against the stream. The speed of the boat in still water (in km/hr) is:

- (a) 3 (b) 8 (c) 5 (d) 9

10. Which of the following is statement –

- (a) Mathematics is easy (b) come here (c) all real no are complex no. (d) he is an engineer.

11. A ball moves in a frictionless inclined table without slipping. The work done by the table surface on the ball is

- (a) Negative (b) Zero (c) Positive (d) None of the options

12. The potential energy of a system increases if work is done

- (a) upon the system by a non-conservative force (b) by the system against a conservative force

- (c) by the system against a non-conservative force (d) upon the system by a conservative force

13. If a light body and heavy body have same kinetic energy, then which one has greater linear momentum?

- (a) Lighter body (b) Heavier body (c) Both have same momentum (d) Can't be predicted

14. A light and a heavy body have equal momentum. Which one has greater K.E.?

- (a) The lighter body (b) The heavier body (c) Both have equal K.E. (d) Data given is incomplete

15. Unit of energy is

- (a) kwh (b) joule (c) electron volt (d) All of the above

16. Which of the following is not a conservative force?

- (a) Gravitational force (b) Frictional force (c) Spring force (d) None of these

17. The speed of an object of mass  $m$  dropped from an inclined plane (frictionless), at the bottom of the plane, depends on:

- (a) height of the plane above the ground (b) angle of inclination of the plane

- (c) mass of the object (d) All of these

18. A body projected vertically from the earth reaches a height equal to earth's radius before returning to the earth. The power exerted by the gravitational force is greatest

- (a) at the instant just before the body hits the earth (b) at the highest position of the body



(c) it remains constant all through

(d) at the instant just after the body is projected.

19. If two particles are brought near one another, the potential energy of the system will

(a) increase

(b) decrease

(c) remains the same

(d) equal to the K.E.

20. When two spheres of equal masses undergo perfect inelastic collision with one of them at rest, after collision they will move

(a) opposite to one another

(b) in the same direction

(c) together

(d) at right angle to each other

21. What is the term for a liquid dispersion in another liquid?

a) Emulsion

b) Aerosol

c) Gel

d) Foam

22. More than one sort of hybridization can occur in a complex with geometry.

a) tetrahedral

b) octahedral

c) trigonal bipyramidal

d) square planar

23. Determine the proper name for  $K_2[PdCl_4]$ .

a) Potassium tetrachlorinepalladium(II)

b) Potassium tetrachloridopalladate(II)Potassium

c) Potassium tetrachloridopalladium(II)

d) tetrachlorinepalladate(II)

24. Which substance is used to determine the hardness of water using a simple titration?

a) Mg(EDTA)

b) Fe(EDTA)

c)  $Na_2$ (EDTA)

d) Co(EDTA)

25. The core atom of which of the following biologically significant coordination molecules is magnesium?

a) Vitamin B12

b) Haemoglobin

c) Chlorophyll

d) Carboxypeptidase-A

26. What form does nitrogen take in plants?

a) Ammonia

b) Amide

c) Nitrate

d) Nitrite

27. What happens to the size of atoms in p-block elements when we move from left to right in the same period?

a) Size does not change

b) Size increases then decreases

c) Size increases

d) Size decreases

28. When ammonia is oxidized to form nitric acid, what catalyst is used?

a) Platinum-Rhodium gauze

b) Vanadium (V) oxide

c) Palladium hydride

d) Sodium amalgam

29. Which of the following compounds has an oxidation state of +5 phosphorus?

a) Peroxodiphosphoric acid

b) Hypophosphorous acid

c) Orthophosphorous acid

d) Hypophosphoric acid

30. Why is nitrogen preferred in the welding and cooling of materials?

a) It is an inert gas

b) It is non-toxic

c) It's a gas and can easily be handled

d) It has an extremely low freezing point

R.D. Engineering College  
Ghaziabad

Director  
R.D. Engineering College  
Duhai, Ghaziabad

Dean Academics  
R.D. Engineering College  
Duhai, Ghaziabad



10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

R.D.F.