

# **Last Year ONGC Placement Paper**

General Awareness-40

1. Where is the next climate summit COP going to take place?
2. Who was the political guru of Mahatma Gandhi?
3. The new Jawaharlal Nehru Mega nuclear project is going to achieve 20000MW is to end in (2015,2022,2030..)
4. What is the origin of Krishna River
5. In which state Tapaimukh dam is going to be made?
6. Who was the leader of congress party in 1907, when extrimists and moderates were separated?
7. In which article it is mentioned that "No child of age less than 14 yrs should be employed"?
8. In which country, Football world cup is being held in 2010?
9. What is the minimum age limit for chief justice of India?
10. The president of India submits its resignation to whom?
11. In which country is bear lake
12. Moplah rebellion was started where?
13. Who wrote "Neel Darpan "while Indigo movement in India?
14. What is the sex ratio in India from the last census?
15. From the census 2001, in which state has there been minimum decadal growth of population ?
16. In which state latest election, all seats were won by a single party?
17. Deficiency of which vitamin leads to Pallegra ( Calciferol, Naicin, Retinol, Riboflavin)
18. Who is the head of UN watch dog , IAEA? (yukio Amano)
19. What is the power of nuclear reactor used in INS Arihant?(200W, 120 W, 80W,..)

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20. KONKAN is a joint naval exercise between which two countries?
21. Who was the head of Army Tribunal meet which recently took place?
22. Where is the India's first aerospace SEZ being formed?
23. Who leads the scientific advisory team of Prime Minister?
24. Which is the highest peak in Satpura range?
25. Which river cuts the tropic of Capricorn twice?
26. In which session was fundamental rights resolution passed? (Lahore, Karachi, Calcutta)
27. Where in India is National environmental institute located?
28. Where is SAC institute located?
29. NH 15 connects which two cities?
30. Who started Mansabdari system ( akbar, Jahangir,...)
31. Where was first Buddhist council held in India?
32. When the earth is at largest distance from the sun, what is that distance called?( apogee, perigee, apehilion,perihelion)
33. What keeps the satellite balanced while rotating in the orbit? (centripetal force and its inertia, gravitational force and inertia....)
34. Which is the sweetest sugar? ( sucrose, maltose, fructose, glucose)
35. What is the highest position of a satellite called when it is in an elliptical orbit? ( zenith, apex,..)
36. Rajiv Gandhi sadbhavna Award 2009 (Gautam BHAI)
37. Parmirajan won which trophy ( he is related to Chess, youngest Indian)
38. What is biological name of red blood cell?

Technical- 80

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1. What is the minimum BW required for a signal rate of 56 KbpS.
2. A parallel connection of LPF and HPF will act as a band reject filter under what conditions?
3. The measurement of Q factor is based on (resonance)
4. The expression  $AB + B'C$  will have \_\_\_\_\_ zeros in its output table.
5. In which type of modulation , no synchronization of carrier is required(BPSK, QPSK, DPSK, QAM)
6. In PLL, from which instrument do we take the output (LPF, encoder....)
7. Demphasis is used when (after modulation, to attenuate the low frequency signals...)
8. Which one is analog ( PWM, PCM, ..)
9. What is the resolution of 6-bit ADC.( in %)
10. In flash ADC, which element gets the output of the source voltage output value? ( Priority encoder, LPF)
11. Given the value 100001 in the fifth pulse of ripple counter, what would be value in 6th pulse.
12. Given a code in BCD, convert it into binary.
13. For a 6 bit SAR DAC (successive..) , the time taken to convert the signal if frequency is 1MHz ( 6  $\mu$ sec,..1/6  $\mu$ sec,..)
14. We don't use a differentiator in a control system ,why? ( it reduces gain, it reduces damping, it adds error)
15. A S.C transmission line of length less than  $\pi/4$ , acts as a ( parallel LC circuit, series LC circuit, A pure inductor, a pure capacitor)
16. Which amplifier has least efficiency?( Class A , B, C, D)
17. If the  $\mu$  is changed from 0 to 1 in AM, what is the change in transmitted power( doubles, increases by 50%.)
18. If the transmitted power is increased by a factor of 16, what is the change in range.
19. An integrator is ( LPF, BPF, bandpass.. bandstop)

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20. If an IP address starts with 110.. in which class will it be considered( Class A, B, C, D)
21. HTTP is a \_\_\_\_\_ protocol( connection oriented, stateless, stateful,...)
22. When A SCR is in forward biased , then ( all 3 junctions are reverse biased, 1 is R.B, 2 F.B,...)
23. What is  $\beta$ ; (  $I_e/I_c$ ...  $I_c/I_e$ ...)
24. What is fan-out expressed in terms of (voltage gain, current gain, unit load terms...)
25. Which two currents are of similar values.(  $I_e$  and  $I_c$ .....,  $I_c$  and  $I_b$ ...)
26. Voltage gain of an emitter follower is ( more than unity ..,less than or equal to unity...)
27. In order to protect the SCR out of increased  $di/dt$ , which circuit is utilized (an inductor in series, a RC in parallel, a circuit breaker)
28. What is holding current?(minimum current at which the SCR comes from off to On)
29. Slew rate is expressed in terms of (  $V/\mu s$ ,  $\mu V/s$ ,....)
30. What is the sensitivity of a voltmeter in terms of (volts/ohm, ohm/volt,volts..)
31. How many SCRs are required for a centre tapped 1-ph cycloconvertor?
32. A 555 timer has how many comparators and FFs?
33. In an FET, the output changes with the gate voltage having polarity ( unity. Two, 3....)
34. Two bulbs of 1000W/250 v are connected in series with a 250V voltage source, what would be the resultant power.
35. 100 bulbs of 9V are connected in parallel, what is the voltage across each bulb?
36. Which theorem suggests a current generator (superposition, thevinin, Norton..)
37. An ideal OPAMP characteristics.. like  $R_i$ ,  $R_o$ ... $A_v$ ..
38. An ADSL technology came with a view that users ( upload more than download, equal upload and download.....)

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39. A  $\mu$ wave signal propagates as a ( direct wave, surface wave, sky wave...)
40. In CRO, the focusing done is (electronic, electrostatic, electromagnetic...)
41. Which flag controls the movement of strings ( parity, direction,...)
42. What does instruction pointer do ( points to which address....)
43. How many FF required to make mod-10 counter.
44. A 4096 bytes memory is required to built by using  $512 * 8$  memory chips , how many address lines required.
45. In a dynamic memory cell, the information is stored in ( capacitor, FF,...)
46. Tunnel diode is a (highly doped PN jn... a p-type....)
47. The difference b/w controlled signal and desired o/p is called ( error signal, actuated signal....)
48. Transfer function is ( L.T of output to i/p)
49. In spread-spectrum, frequency hopping and direct sequence techniques, what is common ( frequency shifting, pseudo random noise generator...)
50. A LASER light is very bright because ( it is coherent, monochromatic....)
51. What is aspect ratio?
52. What is lissagious figures used to find?
53. If in CRO, voltage/division is changed, what is the change implied to?
54. Positive feedback is same as ( regenerative feedback)
55. Given a capacitor and it's charge and voltage. Find the capacitance value.
56. TO make a basic comparator, which gate is employed ( AND, NOR, NAND, XNOR)
57. Given a series of binary numbers, to find the correct parity bit, if odd parity is required.
58. Which has highest noise immunity ( ECL, TTL, CMOS, DTL)

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59. If 0.5v is given as an input to a TTL IC , then it is considered as (LOW, HIGH, undefined, high impedance)

60. Wein bridge is used for what measurement?

61. Unit of magnetic flux.

62. The current in a forward biased pn jn is due to ?

63. Full form of TRAPATT diode.

64. Fetch operation in a instruction cycle is (1st m/c cycle, 2nd, 3rd,)

Subjective type

121. Write on "Unity in Diversity" in India.

122. What is the impact of globalization on rural economy.

123. It is required to find  $V = \int v_1 dt + \int v_2 dt + \int v_3 dt$  . Draw a circuit to realize it and then prove the realization.

124. Given a 4-variable expression. Find the minimized exp using K-Map and then prove the result using Boolean algebra.