

लोक सेवा आयोग
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Key (A)

Mark: 100

उत्तरपुस्तिकामा प्रश्नको key अनिवार्य उल्लेख गर्नुहोला। उल्लेख नगरेमा उत्तरपुस्तिका रद्द हुनेछ साथै परीक्षामा calculator र mobile प्रयोग गर्न पाइने छैन।

1. Definition of health given by WHO includes all of the following dimensions except:

- (a) Social
- (b) Physical
- (c) Mental
- (d) Emotional

2. Standard of Living (WHO) includes all except:

- (a) Income
- (b) Sanitation and nutrition
- (c) Level of provision of health
- (d) Human rights

3. Living standard of people is best assessed by:

- (a) Infant mortality rate
- (b) Maternal mortality
- (c) Physical quality of life index
- (d) Death rate

4. Human living standards can be compared in different countries by

- (a) HDI

- (b) PQLI
- (c) HPI
- (d) DALY

5. Human Development Index (HDI) does not include:

- (a) Mean years of schooling
- (b) Life expectancy at age 1
- (c) Real GDP per capita
- (d) Adult literacy rate

6. All of the following indicators are included in Physical Quality of Life Index (PQLI) except:

- (a) Infant mortality rate
- (b) Life expectancy at age one
- (c) Literacy rate
- (d) Per capita income

7. The Physical Quality of the Life Index considers

- a. Expectancy of life at birth
- b. Expectancy of life at age one
- c. Infant mortality rate
- d. Literacy rate

8. Minimum and Maximum Values established for calculation of Life Expectancy index in HDI are:

- (a) 0 years and 65 years
- (b) 0 years and 85 years
- (c) 25 years and 85 years

(d) 0 years and 100 years

9. Human Development Index (HDI) values range between:

- (a) -1 to +1
- (b) 0 to 1
- (c) 0 to 3
- (d) 1 to 3

10. PQLI stands for:

- (a) Physical quality of life index
- (b) Physical quantity of life index
- (c) Physiological quality of life index
- (d) Psychological quality of life index

11. All of the following are determinants for the essential components to calculate Physical Quality of Index (PQLI) except:

- (a) Infant mortality rate
- (b) Life expectancy at age one year
- (c) Basic literacy rate in population
- (d) Life expectancy at birth

12. Human Development index includes:

- (a) Infant mortality rate
- (b) Life expectancy at birth
- (c) Net reproduction rate
- (d) No. of years of disability

13. PQLI included are:

- (a) Literacy
- (b) Infant mortality
- (c) Income
- (d) Life expectancy at birth

14. HDI includes:

- (a) Infant mortality rate
- (b) Life expectancy at birth
- (c) Life expectancy at 1 yr
- (d) Adult literacy rate
- (e) GDP

15. PQLI includes:

- (a) MMR
- (b) IMR
- (c) Life expectancy at birth
- (d) Life expectancy at 1 yr. age
- (e) Literacy

16. All of the following are included in Human development index (HDI) except:

- (a) Life expectancy at birth
- (b) Life expectancy at 1 year age
- (c) Education
- (d) Gross domestic product (GDP)

17. Not included in the human poverty index is

- (a) % of population not surviving up to 40 yrs age

- (b) Underweight for age
- (c) Occupation
- (d) % population not using safe water supply

18. Age limit for HDI in nepal is :

- (a) 25 to 85 yrs
- (b) 25 to 50 yrs
- (c) 15 to 45 yrs
- (d) 50 to 75 yrs

19.The value of Human Development Index in Nepal is

- (a) 0.500
- (b) 0.545
- (c) 0.505
- (d) 0.540

20. Poverty index does not include:

- (a) Long life
- (b) Knowledge
- (c) Standard of living
- (d) Income

21. P.Q.L.I. is:

- (a) IMR, life expectancy, literacy
- (b) MMR, Life expectancy, literacy
- (c) MMR, IMR, Life expectancy
- (d) IMR, Life expectancy at 1 year of age, SE status

22. Human development index includes all of the following except?

- (a) Adult literacy rate
- (b) Life expectancy at birth
- (c) Income
- (d) Infant Mortality Rate

23. PQLI includes all of the following except:

- (a) IMR
- (b) MMR
- (c) Literacy
- (d) Life expectancy at age one

24. "Physical quality of life index" include all Except:

- (a) Infant mortality
- (b) Life expectancy at age one
- (c) Literacy
- (d) GDP per capita

25. Human Developmental index comprise of:

- (a) Education occupation and income
- (b) Education employment, food and health
- (c) Infant mortality rate, longevity, literacy
- (d) Longevity, income and literacy

26. Human development index includes all except:

- (a) GDP

- (b) Sex ratio
- (c) Knowledge
- (d) Longevity

27.HDI includes:

- (a) Infant mortality, Life expectancy and Literacy
- (b) Maternal mortality, Life expectancy and Literacy
- (c) Disability rate, Pregnancy rate and GNP
- (d) Longevity, Knowledge and Income

28. Which of the following is a Mortality Indicator?

- (a) Life Expectancy
- (b) Notification Rate
- (c) DALY
- (d) Bed turn-over ratio

29.Modified Kuppuswami scale include all criteria for socioeconomic status except:

- (a) Income per capita
- (b) Education of head of family
- (c) Occupation of head
- (d) Income of Head

30.Expectation of life, free of disability is known as:

- (a) Park's index
- (b) Smith's index
- (c) Sullivan's index
- (d) Life index

31. Which is the best index for burden of disease?

- (a) Case fatality rate
- (b) Disability adjusted life years
- (c) Dependency ratio
- (d) Morbidity data

32. Which of the following is a measure of the burden of disease in a defined population and effectiveness of interventions?

- (a) Park's index
- (b) Disability adjusted life year
- (c) Bed disability days
- (d) Activities of daily living index

33. Which one of the following is NOT a socio-economic indicator?

- (a) Literacy rate
- (b) Family size
- (c) Housing
- (d) Life expectancy at birth

34. Most universally accepted indicator of health status of whole population and their socio-economic conditions among the following is:

- (a) MMR
- (b) IMR
- (c) Life expectancy
- (d) Disease notification rates

35. Sullivan index indicates:

- (a) Life free of disability

- (b) Hookworm eggs/gm of stool
- (c) Standard of living
- (d) Pregnancy rate per

36. Virulence of a disease is indicated by:

- (a) Proportional mortality rate
- (b) Specific mortality rate
- (c) Case fatality rate
- (d) Amount of GDP spent on control of disease

37. All the following indicators are used to measure disability rates in a community except:

- (a) Sullivan's Index
- (b) Human Poverty Index
- (c) Health Adjusted Life Expectancy
- (d) Disability Adjusted Life Year

38. Which of the following is true about DALYs?

- (a) Life is adjusted for disease
- (b) Premature death is adjusted for disability
- (c) Life expectancy free of disability
- (d) Years lost to premature death and years lived with disability adjusted for severity of disability

39. Burden of disease is given by

- (a) Incidence
- (b) Crude death rate
- (c) Cause specific death rate

(d) Proportional mortality rate

40. In a village with population of 5000, 50 people have a disease and 10 of them died. What is case fatality rate?

- (a) 1%
- (b) 2%
- (c) 0.5%
- (d) 20%

41. Best indicator of availability, utilization & effectiveness of health services

- (a) IMR
- (b) MMR
- (c) Hospital bed occupancy rate
- (d) DALY

42. One DALY signifies:

- (a) 1 year of disease free life
- (b) 1 lost year of healthy life
- (c) 1 month of bedridden life
- (d) None of these

43. DALE has been replaced by

- (a) DALY
- (b) QALY
- (c) HALE
- (d) DFLE

44. 50 people are suffering from cholera in a population of 5000. Out of 50, suffering from cholera, 10 died. But the total deaths are 50. What is the death rate?

- (a) 1 per 1000
- (b) 5 per 1000
- (c) 10 per 1000
- (d) 20 per 100

45. Communicability of disease is assessed by

- (a) Secondary attack rate
- (b) Generation time
- (c) Serial interval
- (d) Incubation period

46. Sullivan index is

- (a) Measures disability
- (b) Measures life years adjusted with disability
- (c) Measures life expectancy adjusted without disability or free of disability
- (d) Measures life expectancy

47. Health indicators are used for:

- (a) Health status of community
- (b) Requirement of health needs
- (c) Assess rate of infection
- (d) To meet basic needs

48. The expectation of life free of disability is known as:

- (a) Sullivan's index

- (b) DALE (disability – adjusted life expectancy)
- (c) DALY (Disability – adjusted life year)
- (d) PQLI

49. DALY is:

- (a) Disease – Adjusted Life year
- (b) Disability Adjusted Life year
- (c) Disease Associated Life year
- (d) Disability Associated Life year

50. Which of the following is best to compare the vital statistics of countries?

- (a) Crude death and birth rates
- (b) Age standardized death rate
- (c) Age specific death rate
- (d) Proportional mortality rate

ANSWERS AND EXPLANATION

1. Ans. (a) Social; (b) Physical; (c) Mental;

• WHO [1948] definition of Health: Health is a state of complete physical, mental and social well being, and not merely

an absence of disease or infirmity; [recently amplified to include –) and an ability to lead a socially and economically productive life).

– Is an ‘idealistic goal rather than a realistic proposition’

– It does not regard health as a dynamic concept (but as a state)

2. Ans. (d) Human rights

- **Standard of Living:** Refers to the usual scale of our expenditure, goods we consume and services we enjoy
- **Standard of living [WHO] includes:**
 - Income and Occupation
 - Standards of housing, sanitation and nutrition
 - Level of provision of health, educational, recreational and other services

Also Remember

- Standard of living depends on 'Per capita GNP'

3. Ans. (c) Physical quality of life index [Ref. K. Park 21/e p16-17, Park 22/e p16]

4. Ans. (a) HDI [Ref. K. Park 22/e p16]

PQLI AND HDI

5. Ans. (b) Life expectancy at age 1 [Ref. Park 21/e p16, Park 22/e p16]

Also Remember

- Human poverty index [HPI] is complementary to HDI
- Human development index [HDI] Vs Physical quality of life index [PQLI]:

HDI PQLI

Indicator

components

Range

Value of India

1. Longevity – life expectancy at birth

(LEB/ LEO)

2. Income (Real GDP per capita in PPP US\$)

3. Knowledge (Mean years of schooling –

Gross enrolment ratio and Literacy rate)**0 to +1****0.554****1. Life expectancy at 1 year age (LE1****)****2. Infant mortality rate (IMR)****3. Literacy rate****0 to 100****# Also Remember****Human Poverty Index (HPI):**

- **HPI measures: Deprivation in basic dimensions of human development**
- **HPI is complimentary to Human Development Index (HDI)**

Components of HPI – I: (Used for developing countries)– **Probability at birth of not surviving to age 40**– **Adult Illiteracy Rate**– **Un-weighted average of two indicators:**

- 1. % population not using an improved water source**
- 2. % children underweight-for-age**

Components of HPI – II: (Used for developed countries)– **Probability at birth of not surviving to age 60**– **% adults (aged 16-65 years) lacking functional literacy skills**– **% people living below poverty line (BPL)**– **Rate of long term employment (12 months or more)****6. Ans. (d) Per capita income [Ref. Park 21/e p16, Park 22/e p16]****7. Ans. (d) II, III and IV are correct [Ref. Park 21/e p16, Park 22/e p16]**

8. Ans. (c) 25 years and 85 years [Ref. Park 21/e p17] [Now 20 and 83.4 years]

9. Ans. (b) 0 to 1 [Ref. Park 21/e p16, Park 22/e p16]

Also Remember

• Few important ranges in Public Health:

Parameter Range (Lies between)

Correlation coefficient [r] -1 to +1 ($-1 < r < +1$)

Coefficient of determination [r^2

] 0 to +1 ($0 < r^2$

< +1)

Physical quality of life index [PQLI] 0 to +100 ($0 < PQLI < +100$)

Human development index [HDI] 0 to +1 ($0 < HDI < +1$)

Probability 0 to +1 ($0\% < Probability < 100\%$)

Sensitivity [screening test] $0\% < Sensitivity < 100\%$

Specificity [screening test] $0\% < Specificity < 100\%$

PPV (screening test) $0\% < PPV < 100\%$

NPV (screening test) $0\% < NPV < 100\%$

10. Ans. (a) Physical quality of life index [Ref. Park 21/e p16, Park 22/e p16]

11. Ans. (d) Life expectancy at birth [Ref. Park 21/e p16, Park 22/e p16]

12. Ans. (b) Life expectancy at birth [Ref. Park 21/e p16, Park 22/e p16]

13. Ans. (a) Literacy; (b) infant mortality [Ref. Park 21/e p16, Park 22/e p16]

14. **Ans. (b) Life expectancy at birth; (d) Adult literacy rate; (e) GDP [Ref. Park 21/e p16, Park 22/e p16]**
15. **Ans. (b) IMR; (d) Life expectancy at 1 yr. age; (e) Literacy [Ref. Park 21/e p16, Park 22/e p16]**
16. **Ans. (b) Life expectancy at 1 year age [Ref. Park 22/e p16]**
17. **Ans. (c) Occupation [Ref. K Park 20/e p15]**
18. **Ans. NONE [NOW its 20 – 83.4 years] [Ref. K. Park 22/e p16]**
19. **Ans. (b) 0.545 [CURRENT value: 0.554] [Ref. K. Park 22/e p16]**
20. **Ans. (d) Income [Ref. K. Park 21/e p16]**
21. **Ans. (a) IMR, life expectancy, literacy [Ref. Park 21/e p16, Park 22/e p16]**
22. **Ans. (d) Infant Mortality Rate [Ref. Park 21/e p16, Park 22/e p16]**
23. **Ans. (b) MMR [Ref. Park 21/e p16, Park 22/e p16]**
24. **Ans. (d) GDP per capita [Ref. Park 21/e p16, Park 22/e p16]**
25. **Ans. (d) Longevity, income and literacy [Ref. Park 21/e p16, Park 22/e p16]**
26. **Ans. (b) Sex ratio [Ref. Park 21/e p16, Park 22/e p16]**
27. **Ans. (d) Longevity, Knowledge and Income [Ref. Park 21/e p16, Park 22/e p16]**
28. **Ans. (a) Life Expectancy [Ref. Park 21/e p24, 25, Park 22/e p22, 23]**
- **Life Expectancy is a ‘Positive mortality indicator’**

Review of Preventive and Social Medicine

Concepts of Health and Disease

Also Remember

- DALY is a type of disability rate
- Bed turn-over ratio is a type of health care utilization rate

29. Ans. (d) Income of Head [Ref. Textbook of Community Medicine by Sunder Lal, 2/e p17, Park 22/e p640, 39]

- Modified Kuppuswami scale is a 'Scale of Socio-economic Status of Urban families'. It comprises of 3 components:

- Education Status of head of family
- Occupation Status of head of family
- Income per capita per month

30. Ans. (c) Sullivan's index [Ref. Park 21/e p25, Park 22/e p23]

- Sullivan's Index = Life Expectancy MINUS Duration of disability (bed disability and inability to perform major

activities)

- It is one of the most advanced indicators currently available

31. Ans. (b) Disability adjusted life years [Ref. Park 21/e p26, Park 22/e p24]

- Disability adjusted life years [DALYs]: Is a measure of the burden of disease in a defined population and the effectiveness

of interventions; It expresses years lost to premature death and years lived with disability adjusted for its' severity

Also Remember

- DALYs can measure 'both mortality and disability together'
- Case fatality rate measures 'virulence of an organism' or 'killing power of a disease'
- Dependency ratio measures the 'need for society to provide for its' younger and older groups'
- Morbidity data measures 'any departure from health'

32. Ans. (b) Disability adjusted life year [Ref. Park 21/e p26, Park 22/e p24]

33. Ans. (d) Life expectancy at birth [Ref. K. Park 19/e p25; 20/e p26, Park 21/e p25,26, Park 22/e p23, 24]

- Socio-economic indicators: [Mnemonic: He FLAGGED]

- Housing – Family size
- Literacy rate – Availability per capitacalorie
- Per capita GNP – Growth rate
- Level of unEmployment – Dependency ratio

34. Ans. (b) IMR [Ref. Park 21/e p25, Park 22/e p23]

- **Infant Mortality Rate [IMR]:** Is one of the most universally accepted indicators of health status not only of infants, but also of the whole population and the socio-economic conditions under which they live
- **IMR is a sensitive indicator of availability, utilization and effectiveness of health care, particularly perinatal care**
- **Infant Mortality Rate [IMR]:**
 - Infant Mortality Rate [IMR] is a rate
 - Is the second best indicator of socio-economic development of a country: Ultimate solution for lowering IMR lies in socio-economic development [Best indicator is U5MR]
 - Is most important indicator of health status of a community, level of living and effectiveness of MCH services in general
 - IMR is among ‘the best predictors of state failure’

Also Remember

- **Disability adjusted life expectancy [DALE]:** DALE brings more information than infant mortality rate (IMR) when comparing the overall health status of different populations. But, DALE is quite difficult to compute and to precisely understand.

For countries with limited resources that require an easily calculated measure of population health, IMR may remain a suitable choice.

- **UNICEF considers U5MR or CMR as ‘single best indicator of socio-economic development and well-being’ (even better than IMR)**

35. Ans. (a) Life free of disability [Ref. Park 21/e p25, Park 22/e p23]

- The simplest index of health which incorporates morbidity as well as mortality is Sullivan's Index of Disability-Free

Life Expectancy (DFLE)

Also Remember

- Chandler's Index: Hookworm eggs/gm of stool
- Standard of living [WHO]: Income and occupation, standards of housing, sanitation and nutrition, level of provision of

health, educational, recreational and other services

- Pregnancy rate per HWY: Pearl Index (Failure rate of Contraceptives)

36. Ans. (c) Case fatality rate [Ref. Park 21/e p54, Park 22/e p55]

CASE FATALITY RATE (CFR):

- CFR represents 'killing power of a disease'
- It is 'closely related to virulence of organism'

CFR = Total no. of deaths due to a disease

Total no. of cases due to a disease $\times 100$

- CFR is a Proportion: Always expressed in percentage
- CFR is the 'complement of Survival Rate', thus $CFR = 1 - \text{Survival Rate}$
- Limitations of CFR:
 - Time interval is not specified
 - Usefulness is limited for chronic diseases [CFR typically used in acute infections]
 - CFR for the same disease may vary in different epidemics

37. Ans. (b) Human Poverty Index [Ref. K. Park 21/e p17-18, 25-26, Park 22/e p23, 24]

38. Ans. (d) Years lost to premature death and years lived with disability adjusted for severity of disability [Ref. K. Park

21/e p26, Park 22/e p24]

39. Ans. (d) Proportional mortality rate [Ref. K. Park 22/e p23]

40. Ans. (d) 20% [Ref. K. Park 22/e p23]
41. Ans. (a) IMR [Ref. K. Park 22/e p23]
42. Ans. (b) 1 lost year of healthy life [Ref. K. Park 22/e p24]
43. (c) HALE [Ref. K. Park 22/e p24]
44. Ans. (c) 10 per 1000 [Ref. K. Park 22/e p22-23]
45. Ans. (a) Secondary attack rate [Ref. K. Park 22/e p96]
46. Ans. (c) Measures life expectancy adjusted without disability or free of disability [Ref. K. Park 22/e p24]
47. Ans. (a) Health status of community [Ref. Park 21/e p24, Park 22/e p22]
48. Ans. (a) Sullivan's index [Ref. Park 21/e p25, Park 22/e p23]
49. Ans. (b) Disability Adjusted Life year [Ref. 21/e p26, Park 22/e p24]
50. Ans. (b) Age standardized death rate [Ref. Park 21/e p55, Park 22/e p56]