ANSWERS TO DEVELOPMENT OF INDUSTRY

1. Identify the main source of industry energy
   - Petroleum/oil

2.Which country pioneered industrial revolution in Europe :
Britain. 1x1 = 1mk

3. a) State five factors that have undermined scientific revolution in developing countries (5mrks)

- Insufficient funds to invent in scientific research
- Theoretical curricular which undermine the implementation of science and mathematics
- Overdependence of developing countries on developed nations for scientific invention has killed innovation and creativity in scientific work
- Inadequate scientific support from government for scientific research when making budgetary allocation and formulating policy
- High level of illiteracy in developing nations. Any 5x1 5mks

b) Explain the factors that led to the development of industrialization in Brazil (10mrks)

- Rich in mineral resources e.g. manganese iron ore and cranium
- Good economic policies e.g. imposing heavy taxes on imports
- Availability of bath skilled and unskilled labour from its large population
- Heavy influx of foreign capital from USA, Britain, France and Portugal
- Diversification of agriculture ensured that cotton, sugarcane; rubber and coffee were grown at the same time.
- The development of electric power in Brazil
- The abolition of slavery in 1888 ensured cheap labour
- Starting of steam navigation on the Amazon river improved water transport system
- Continuous influx of immigrants in Brazil led to investing in industries and provision of technological know how
- High import duties were levied on imported goods and their protected the home industries against competition and importation of cheap industrial goods.

Any 5x2 = 10mks

4. **Two disadvantages of wind as a source of energy**

- Its irregular and unreliable since it depends on nature
- Its intensity keeps on fluctuating and therefore unreliable
- Changes course without warning 2 x 1 = 2 Marks

5.Major contribution of Edward Jenner

- Development of a vaccine for small pox 1 x 1 = 1 Mark

6. - One area source; Iron came from outside Africa and spread along the River Nile to Merowe,

West Africa and South Africa.

- Independent source; Africans may have learnt iron smelting through these experience of pot

making (**Any 1 points, *x 1 = 1mk)***

7. - Heating at home

- Drying agricultural produce ***(2 x 1 = 2mks)***

8. Identify two uses of Bronze in Ancient Africa.
(2 mks)

- Making ornaments.

- Making weapons.

- Used as currency.

- Was an item of trade.

- Making statues. (2 x 1 2 rnks)

9. Give one invention that was made by Isaac Newton . (1 mk)

- Force of gravity

- The nature of light and the speed at which it travels.

- The reflecting telescope and the colours of the spectrum.

10. . Disadvantages of using coal as a source of industrial energy

-It's bulky hence difficult to transport

-Pollutes the environment

-Expensive to mine

-It's non-renewable

-Risky to miners 2x1=2mks

11. One contribution of John Dalton

-Discovered all matters is made up of tiny particles called Atoms or Atomic theory.
1 X1=(1mk)

12. a) State the factors which hinder industrial development in the 3rd world countries

-Lack of capital to exploit her resources as most countries are poor

-Poor means of transport and communication

-High competition from development countries who produce high quality and cheap product.

-Lack of ready market

-Political instability disrupt the economy

-Lack of skills and technological know how due to high level of illiteracy and brain drain

-Poor government policies, hence do not protect their local industries

-Unexploited mineral and energy resources/ lack of oil and coal

-Epidermic diseases like HIV/AIDS which strain and divert the financial resources from industrial development 8x1 well explained =8mks

13. Identify <u>two</u> advantages of electricity as a modern source of energy (2mks)

i) It is renewable

ii) It is a clean source of energy

iii) Power supply can be regulated/ switched on and off

iv) Has various sources of production

v) It is convenient and efficient to use ***1 x 2 = 2mks***

14. a) **Give <u>five</u> ways in which the discovery of iron technology affected the lives of African Communities during the pre colonial period. (5mks)**

i) Forests were cleared hence increased farming

ii) Strong weapons were made which were used to conquer communities – led to rise or fall of kingdoms.

iii) It enabled communities establish strong defence system.

iv) Where iron working took place , towns developed e.g meroe.

v) The blacksmiths emerged in society.

vi) Items made of iron were exchanged for in trade.

vii) Iron tools made communities migrate and settle in different places e.g the Bantu.

viii) Ornaments were made from iron for decoration.

ix) Iron tools increased hunting

b) **Explain <u>five</u> factors which contributed to industrialization of Germany in the nineteenth Century.**
(10mks)

i) The established of the Zolleverein removed barriers leading to free trade.

ii) Availability of sources of energy such as coal, H.E.P

iii) Availability of iron ore as a source of raw materials

iv) The political unification of all German states under the leadership of Bismack.

v) The acquisition of Alsace – Lorraine in 1871 which boosted the mineral resources

v) The existences of a large population provided labour

vi) The availability of market from the large population.

vii) Development of good transport and communication network.

viii) The government supported industry and encouraged German entrepreneurs work hard

ix) The German were enterprising citizens

x) Availability of water for industrial use.

xi) Availability of capital for industrial investment

xii) Political stability encouraged industrialization.

xiii) Growth of Banking and Insurance systems. 5 x 2 = 10mks

15. State the main disadvantage of wind as an early source of energy (1mk)

i) Wind relies entirely on nature hence not reliable 1x1 = 1mark

16. Mention two contributions of Louis Pasteur in the field of medicine (2mks)

ii) He discovered the process of pasteurization of liquid food e.g. milk

iii) Discovered that bacteria (microbes) causes diseases

iv) He also discovered the cures for rabies, anthrax and snake bites

Any 2x1 = 2marks

17. i) Use of machines to replace human labour

ii) Production of goods on large scale.

iii) Improved living standards / increase in human population

iv) The rise of the factory system. (1 x1 = 1mk)

18 a) i) The use of electronics has led to the production and use of computers in processing and storing.

ii) The discovery of nuclear power has led to increased power production for industrial use.

iii) Science has revolutionized the transport network through invention of vehicles and trains.

iv) Labour saving robots have been invented and used in industries.

v) The use of machines has led to production of goods in larger quantities

vi) Communication network has been revolutionized through use of internet and E- mail to advertise industrial products

ii) It has led to the production of alternative sources of energy for use in industries. (Any 5 x1 = 5mks)

b) i) Provision of capital and credit to their people which will reduce poverty and enhance investment.

ii) Improve the purchasing power of their people by increasing incomes.

iii) Encourage industrial investment by giving incentive and protection to local manufacturing sectors.

vi) Developed and extend the transport and communication infrastructure.

v) Reclaim marshy land and dry lands through drainage and irrigation for

settlement & exploitation.

vi) Diversification of the economy and manufacturing industries.

vii) Promote and provide scientific and technological education to their people.

viii) Boost and encourage regional co-operation for a wider industrial market.

ix) Reduce military expenditure and divert funds for manufacture of products for the wide domestic and external market. (Any 5x2 =10mks)

19. Bulky and transporting it is difficult
- Produces too much smoke.
- Expensive to mine
- Mining coal is risky as miners lose their lives

2x1=2mks

20. . Negative effects of scientific revolution on industries.

(i) Unemployment due to use of machines.

(ii) Increased pollution of environment.

(iii) Manufacture of destructive weapons used in war

2x1= (2mks).

21. **Main role of International labour Organization**.

(i) To promote economic and social standards of workers / promote working conditions or labourers.

22. Name <u>two</u> advantages of metal tools over stone tools. (2mks)
- ***They don't break easily***
- ***They have sharp cutting edge which can be sharpened easily***
- ***Metal scraps can be recycled***
- ***The tools are light to work with***
- ***Molten metal can be cast into various shapes.***

2x 1 = 2mks

23.State <u>one</u> theory that explains the spread of iron working in Africa during the 15th century. (1mk)

- ***One area theory: iron came from outside Africa and spread along river Nile to Meroe West Africa and South Africa.***
- ***Independent source. Africans may have learnt iron smelting through experience of***

pot making.

1 x 1 = 1mk

24. Identify factors that facilitated the spread of iron working in Africa. (2 mks)

- trade
- migrations
- intermarriages
- travellers and messengers
- warfare/conquest
- development of agriculture

25. The greatest contribution of Robert Koch in the field of Science

- Discovered the microbes that cause Tuberculosis, cholera and anthrax.
  1x1= 1mk

26. Two reasons why coal was used as the main source of industrial power in Britain during the Industrial Revolution

- It was cheap
- available in large quantities
- was more efficient than other sources of energy at the time 2 x 1 = 2

27. - Atomic theory **(1 x 1=1mk)**

28 a) -Trade with Mesopotamia

- Bantus migration to W.Africa, central and S.Africa

- Travelers and messengers spread the art by giving or receiving gifts of iron

- Spread through warfare

- Intermarriages between clans and communities

- Development of agriculture created market for tools. ***(Any 5 x 1=5mks)***

b) - Lack of skilled labour
- High poverty levels

- Stiff competition with developed nations for markets

- Huge foreign debts

- Low technology

- Poor transport

- Monopoly by multinational companies

- Unexploited/ underexploited Amazon basin ***(Any 5 x 2=10mks)***

29. a) i) High population leading to high recurrent expenditure

ii) Competition from other developed countries

iii) Lack of an efficient transport and communication network

iv) Natural calamities e.g. cyclones, floods etc

v) Political conflicts e.g. civil interests oftenly turn violent (any 5x1=5mks)

b) i) Increased foreign exchange earning

ii) Improvement in the population's standard of living

iii) improvement of the agricultural sector due to improved machinery

iv) employment opportunities

v) expansion of urbanization

vi) it has become technologically advanced and a nuclear power

vii) its infrastructure has improve

viii) Cottage industry has been transformed to modern industrialization.
(any 5x2=10mks)

30. ***State two ways in which the industrial revolution in Europe promoted colonialism (2 marks*****)**

1. Colonies acted as sources of raw materials for industries.
2. Colonies acted as markets for the manufactured goods.
3. Colonies acted as outlets where they could invest surplus capital.
(2x1 = 2marks)

31 a) Give five reasons why many developing countries have lagged behind in industrialization

4. Long periods of colonization.
5. Poor transport and communication.
6. Lack of capital.
7. Low literacy level.
8. Stiff competition from the industrialized nations.
9. Poverty leading to small domestic matters.
10. Political instability.
11. Poor leadership and corruption.
12. Brain drain. **(5 x 1 = 5mrks)**

b) Explain five effects of industrial revolution in Europe:

1. Led to rural urban migration.
2. Lead to creation of social groups urban to urban migration.
3. Led to population increase in towns hence unemployment and congestion.
4. Led to population growth.
5. Led to improved medical services.
6. Led to collapse of cortege industries.
7. Created poor working conditions in the industries.
8. Led to child and women labour. **Any 5pts x 2 = 10mrk)**

32. Identify the major limitations of using wind as a source of energy in early times (1mk)

- Not reliable/unpredictable

33. (a) **Give five factors limiting scientific inventions in developing countries** (5mks)

- Inadequate capital for use in Scientific research
- Overdependence on developed countries due to poverty (Dependency syndrome)
- Little emphasis on teaching of science in schools
- Inadequate support from government to assist in research
- Illiteracy among the people
- Excessive overdependence on foreign or imported items e.g. engines, Pharmaceuticals and Machinery
- Brain drain- Professionals migrate to developed world
- Lack of initiatives on the side of researchers thus discouraging others to carry out research

1 x5 = 5mks

(b) **Explain five negative effects of scientific inventions on Agriculture**

(10 mks)

- Use of agricultural machinery has created unemployment
- Use of pesticides and fertilizers are toxic and therefore h armful to both human beings and animals
- The use of some fertilizers impoverish the soil
- Consumption of chemically treated foodstuffs may lead to the emergence of incurable diseases

- Biotechnology is threatening traditional crops and animals because of cross breeding and development of hybrids

Points should be explained 2 x 5 = 10 mks