This review activity encompasses only a portion of what will be on your test. Remember to study the entire unit.

1 How many quarks are there in the standard model?

A. six

B. four

C. twelve

D. sixteen

2 The Up Quark is in the same generation as

A. Charm

B. Top

C. Down

D. Strange

3 The charge on the Charm (C) Quark is the same as the charge on

A. Strange

B. Top

C. Muon Neutrino

D. Electron

4 The charge on a Bottom is

A. +2/3

B. -1/3

C. -1

D. 0

5 If the three quarks UUD were to combine, what would be the total charge?

A. +1

B. -1

C. 0

D. +4/3

6 So a UUD is commonly called a

A. proton

B. neutron

C. electron

D. carryon

7 What charge would the quark triplet DDU have?

A. +1

B. -1

C. 0

D. -4/3

8 DDU is also known as a

A. proton

B. neutron

C. electron

D. clingon

9 Which generation of matter is most of our w of?

A. Generation I

B. Generation II

C. Generation III

D. I got nothing here...how should we know?

10 The electron charge is

A. +2/3

B. -1/3

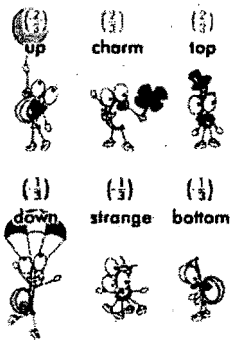
C. -1

D. 0

11 Below are quark charges, what is a neutrino charge?

A. 0

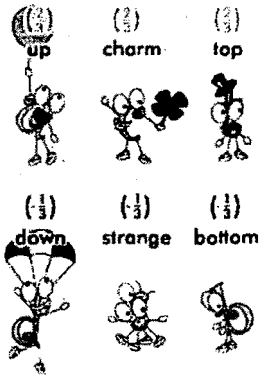
B. -1



12 Below are the quark charges, what is a Muon charge?

A. 0

B. -1



13

The Charge on a Tau is

A. +2/3

B. -1/3

C. -1

D. 0

14

Finish this:
An electron is to Up as a Tau is to

A. Strange

B. Top

C. Down

D. Charm

15 The electron is paired with a neutrino. Name that neutrino.

A. Muon

B. Tua

C. Tau and Muon

D. Electron Neutrino

16 Take a shot, which of these leptons is the most rare?

A. Tau

B. Muon

C. Electron

D. They are all equally rare

17 On the chart, mass is listed in units of

A. Atomic Mass Units

B. Energy

C. Momentum

D. Force

18 One GeV =

A. .001 MeV

B. .1 MeV

C. 10 MeV

D. 1000 MeV

19 Put these in order of Least Energy to Most

A. eV, MeV, KeV, GeV

B. GeV, MeV, KeV, eV

C. eV, KeV, MeV, GeV

D. eV, GeV, KeV, MeV

20 What is the most massive Quark?

A. Up

B. Down

C. Charm

D. Top

21 Just when this was getting fun, now you need your calculator. How many more times massive is T than U?

A. 10

B. 100

C. 1000

D. 10,000

22 To create/discover a T would require more or less energy than to create/discover an U?

A. much less

B. less

C. more

D. MUCH MORE

23 In Generation III the Fermions are

A. More massive than Generation II

B. The most Massive of all three Generations

C. Different colors than the other Generations

D. More common than the other Generations

24 Go out on a limb here, which quark was the last to be found?

A. Top

B. Bottom

C. Down

D. Charm

25 Color is described on the chart as...

A. weight

B. charge

C. momentum

D. energy

26 What colors do quarks come in?

A. Cyan, red, green

B. red, blue, green

C. green, yellow, cyan

D. cyan, magenta, yellow

27 Think Color Theory...red+green+blue = ...

A. Black

B. White

C. Brown

D. The US Flag

28

We learned that three quarks make u
me...what were those three quarks?

A. UUD

B. DDU

C. DUD

D. BUT

29

In order for three quarks to exist in a stable configuration, they must be what color?

A. red

B. green

C. blue

D. white

d 30.

In color theory we learned that cyan and red made...

A. white

B. Christmas colors

C. brown

D. black

y 31.

The complimentary colors; cyan, magenta, and yellow need one color to make white. In order, those colors are...

A. red, green, blue

B. green, blue, red

C. red, blue, green,

D. blue, red, green

32

This suggests that matter can be stable (white charge) if a color and the anti-color combined!

A. True

B. False

33

This further suggests that there is an entire group of particles with the opposite charge and color. These particles are called...anti-matter!

A. True

B. False

34

An anti-T has charge -2/3 and colors C,M,Y

A. True B. False

35

Anti-U, Anti-D and D can make a stable particle

A. True B. False

36

To make a stable two quark object (called a Meson) you could use a

A. A green U and a cyan anti-U

B. A magenta U and a green anti-U

C. A red U and a cyan anti-U

D. A green U and a red anti-U

Standard Atomic Review Answers

1. a
2. c
3. b
4. b
5. a
6. a
7. c
8. b
9. a
10. c
11. a
12. b
13. c
14. b
15. d
16. a
17. b
18. d
19. c
20. d
21. SKIP
22. d
23. b
24. a
25. b
26. b
27. a
28. a (make up a proton)
29. d
30. a
31. a
32. a
33. a
34. a
35. b
36. c

Other Topics to Cover
-Models of the atom
-Three types of radioactive decay
-Fission and Fusion
-E=mc^2 problems
-Atomic Bomb Effects
-Einstein Movie